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Guidance for the Reregistration of Pesticide Products Containing Folpet as the Active Ingredient

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This document contains information regarding the registration of pesticide products containing the subject active ingredient. The document includes how th register under a registration standard, regulatory position and rationale, and summaries of data requirements and data gaps. Also included is a bibliography containing citations of all studies reviewed by EPA in arriving at the positions and conclusions contained in the standard.

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II. CHEMICAL COVERED BY THIS STANDARD

A. Description of Chemical

The following chemical is covered by this Registration Standard:

Common name: Folpet
Chemical name: N-(trichloromethylthio)phthalimide
Chemical Family: Dicarboximides or chlorinated organosulfur compounds.
CAS Number: 133-07-3
OPP (Shaughnessy) Number: 081601
Empirical Formula: $C_9H_4Cl_3NO_2S$
Trade Names: Folpan, Folpex, Phaltan, and Thiophal
Physical Characteristics: White Crystalline Solid
M.W.: 296.5 grams
Melting Point: 177 °C
Boiling Point: 150 °C at 0.02 mm Hg
Solubility: Insoluble in water. Very low solubility in aliphatic hydrocarbon solvents. Low solubility in aromatic, polar, oxygenated, and halocarbon solvents.
Volatility: Nonvolatile at ordinary temperatures.

B. Use Profile

Folpet is a broad-spectrum fungicide which is registered with the EPA for use in the culture of both food and nonfood crops and as an industrial fungicide. It is registered for use as a foliar fungicide to be applied to apples, avocados, blackberries, blueberries, boysenberries, celery, cherries, citrus fruits, crabapples, cranberries, cucumbers, currants, dewberries, garlic, gooseberries, grapes, huckleberries, leeks, lettuce, loganberries, melons, onions (dry bulb), onions (green), pumpkins, raspberries, shallots, squash (summer), squash (winter), strawberries, and tomatoes. It is also registered for use on ornamental plants and for use in the manufacture of interior and exterior paints and coatings and in the manufacture of plastics.

Folpet was first registered in 1962 by the U.S. Department of Agriculture. There are presently 11 registrants of 18 folpet manufacturing-use products (MPs). These products contain from 1.4 to 88 percent folpet. These products are formulated

EPA has authority under the Data Call-In (DCI) provisions of FIFRA sec. 3(c)(2)(B) to require that registrants submit data to answer questions regarding the chemical, toxicological, and environmental characteristics and fate of a pesticide. This Registration Standard lists the data EPA believes are necessary to resolve concerns about this pesticide. These data are listed in the Tables A, B, and C in Appendix I. Failure to comply with the DCI requirements enumerated in this Registration Standard may result in issuance by EPA of a Notice of Intent to Suspend the affected product registrations.

Registrants are reminded that FIFRA sec. 6(a)(2) requires them to submit factual information concerning possible unreasonable adverse effects of a pesticide at any time that they become aware of such information. Registrants should notify the Agency of any information, including interim or preliminary results of studies, if those results suggest possible adverse effects on man or the environment. This requirement continues as long as the products are registered by the Agency.

active ingredient. However, during the review of these data the Agency is also looking for potential hazards that may be associated with the end use products that contain the active ingredient. The Agency will apply the provisions of this Registration Standard to end use products if necessary to protect man and the environment.

EPA's reassessment results in the development of a regulatory position, contained in this Registration Standard, on the pesticide and each of its registered uses. See Section IV - Regulatory Position and Rationale. Based on its regulatory position, the Agency may prescribe a variety of steps to be taken by registrants to maintain their registrations in compliance with FIFRA. These steps may include:

1. Submission of data in support of product registration;

2. Modification of product labels;

3. Modifications to the manufacturing process of the pesticide to reduce the levels of impurities or contaminants;

4. Restriction of the use of the pesticide to certified applicators or other specially trained individuals;

5. Modification of uses or formulation types; or

6. Specification of packaging limitations.

Failure to comply with these requirements may result in the issuance of a Notice of Intent to Cancel or a Notice of Intent to Suspend (in the case of failure to submit data).

In addition, in cases in which hazards to man or the environment are identified, the Agency may initiate a special review of the pesticide in accordance with 40 CFR Part 154 to examine in depth the risks and benefits of use of the pesticide. If the Agency determines that the risks of the pesticide's use outweigh the benefits of use, the Agency may propose additional regulatory actions, such as cancellation of uses of the pesticide which have been determined to cause unreasonable adverse effects on the environment.

I. INTRODUCTION

EPA has established the Registration Standards program in order to provide an orderly mechanism by which pesticide products containing the same active ingredient can be reviewed and standards set for compliance with Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as amended September 30, 1978. The standards are applicable to reregistration and future applications for registration of products containing the same active ingredient.

Each registrant of a product containing an active ingredient subject to this Standard who wishes to continue to sell or distribute that product must bring his product and labeling into compliance with FIFRA, as instructed by this Standard. Pesticides have been grouped into use clusters and will be reviewed on the basis of a ranking scheme giving higher priority to (1) pesticides in clusters used on food and feed crops; and (2) pesticides produced in large volumes.

The Registration Standards program involves a thorough review of the scientific data base underlying a pesticide's registration. The purpose of the Agency's review is to reassess the potential hazards arising from the currently registered uses of the pesticide; to determine the need for additional data on health and environmental effects; and to determine whether the pesticide meets the "no unreasonable adverse effects" criteria of FIFRA. In its review EPA identifies:

1. Studies that are acceptable to support the data requirements for the currently registered uses of the pesticide.

2. Additional studies necessary to support continued registration. The additional studies may not have been required when the product was initially registered or may be needed to replace studies that are now considered inadequate.

3. Labeling revisions needed to ensure that the product is not misbranded and that the labeling is adequate to protect man and the environment.

The detailed scientific review, which is not contained in this document, but is available upon request[1], focuses on the pesticide active ingredient. The scientific review primarily discusses the Agency's evaluation of and conclusions from available data in its files pertaining to the pesticide

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[1] The scientific reviews may be obtained from the Information Services Section, Program Management and Support Division (TS-757C), EPA, 401 M St., SW, Washington, D.C. 20460.

GLOSSORY OF TERMS AND ABBREVIATIONS

ADI:	Acceptable Daily Intake
a.i.:	active ingrdient
CAS:	Chemical Abtract Services (number)
CSF:	Confidential Statement of Formula
EPA:	The U.S. Environmental Protection Agency (Agency)
FIFRA:	The Federal Insecticide, Fungicide, and Rodenticide Act
LC_{50}:	Median lethal concentration - a statistically derived concentration of a substance that can be expected to cause death in 50% of test animals, expressed as weight or volume of test substance per volume of air or water or per weight of feed (e.g., mg/l or ppm).
LD_{50}:	Median lethal dose - a statistically derived single dose that can be expected to cause death in 50% of test animals when administered by the route indicated, expressed as weight of substance per unit weight of test animal (e.g., mg/kg)
LEL:	Lowest Effect Level
MPI:	Maximum Permissible Intake
MRID:	Master Record Identification (number) - EPA's system of tracking studies used in support of registration
NPDES:	National Pollution Discharge Elimination System
NOEL:	No Observed Effect Level
OPP:	The Office of Pesticide Programs of the U.S. EPA
OES:	The Office of Endangered Species, U.S. Fish and Wildlife Service
Technical:	active ingredient as manufactured

APPENDICES

I. DATA APPENDICES

- Guide to Tables
- Table A
- Table B

II. LABELING APPENDICES

- Summary of Label Requirements and Table
- 40 CFR 162.10 Labeling Requirements
- Physical/Chemical Hazards Labeling Statements
- Storage Instructions
- Pesticide Disposal Instructions
- Container Disposal Instructions

III. USE INDEX APPENDIX

IV. BIBLIOGRAPHY APPENDICES

- Guide to Bibliography
- Bibliography

V. FORMS APPENDICES

EPA Form 8580-1	FIFRA §3(c)(2)(B) Summary Sheet
EPA Form 8580-6	Certification of Attempt to Enter Into an Agreement with Other Registrants for Development of Data
EPA Form 8580-4	Product Specific Data Report
EPA Form 8570-27	Formulator's Exemption Statement

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GUIDANCE FOR THE
REREGISTRATION OF PESTICIDE PRODCUTS
CONTAINING AS THE ACTIVE INGREDIENT

FOLPET
(081601)

CASE NUMBER 0630

CAS 133-07-3

ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF PESTICIDE PROGRAMS

WASHINGTON, D.C. 20460

June 1987

United States
Environmental Protection
Agency

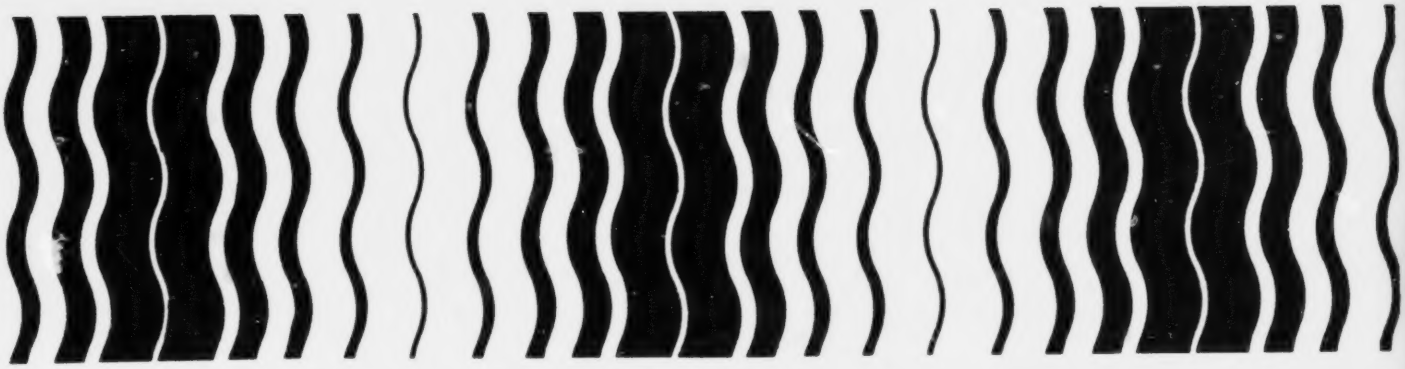
Office of
Pesticides and Toxic Substances
Washington DC 20460

June 1987

Pesticides

EPA

Guidance for the Reregistration of Pesticide Products Containing Folpet as the Active Ingredient



into 4% to 88% dusts, 14.5% to 88% wettable powders, 5% to 8.82% wettable powder/dusts, 0.0616% to 0.2288% impregnated materials, 13% to 44% flowable concentrates, 0.27% to 1.0% liquid ready-to-use products, 0.5% to 0.75% pressurized liquids, a 4% pressurized dust and a 14.18% water soluble pellet (tablet).

Folpet is compatible with most commonly used fungicides, insecticides, and adjuvants. It is not compatible with hydrated lime, strongly alkaline materials, or emulsifiable concentrate insecticides. It should not be used in combination with or closely following oil sprays. Methods of application include dusting, spraying, or directly incorporating it into paints and coatings and into plastic formulations. Folpet inhibits normal cell division of a broad spectrum of microorganisms, however the precise mechanism of this effect is not understood.

III. AGENCY ASSESSMENT

A. SUMMARY

The Agency has reviewed data submitted to support the registration of folpet. Numerous data gaps were identified and few definitive conclusions could be made. Based on available data, the Agency has reached the following interim conclusions which are discussed in detail in Section B, which follows:

1. Folpet is a group B_2 oncogen (probable human carcinogen) based on oncogenic responses in two studies with different strains of mice, the genotoxicity of the chemical, and its structural similarity to captan, which also is considered by the Agency to be an oncogen. Folpet causes developmental effects in laboratory animals.

   Due to the lack of data, oncogenic and developmental risk estimates for dietary exposure were based on tolerances rather than actual residues in foods and developmental risks to mixers/loaders/applicators were based on an estimated dermal absorption rate of 0.4%. Residue chemistry and dermal absorption data will be received within 4 years and 1 year from receipt of the Registration Standard, respectively. When these data are received and reviewed, risk figures may be lower than assumed for the current risk assessment.

2. Thirty established tolerances for residues of folpet in raw agricultural commodities (40 CFR 180.191) are inadequately supported by both residue chemistry and toxicology data. Additional data in these areas are required.

3. The Agency's review identified missing data necessary to evaluate the potential hazard to the environment and to human health associated with the continued use of folpet as an active ingredient in pesticide products. The missing data are listed as data gaps in the tables of Appendix I of this document, and must be submitted in order to continue existing registration of pesticide products containing folpet and in order to register new pesticide products that contain folpet. A summary of the data gaps are listed below. Please note this is only a summary and complete details can be obtained by referring to the tables in Appendix I.

Toxicology

Acute Inhalation
21-Day - Subchronic Dermal
Chronic Feeding in a Rodent (Reserved*)
Metabolism
Reproduction - Mouse (Reserved)
Mutagenicity - *in vitro* Chromosome Aberrations
Dermal Penetration

Ecological Effects

Freshwater Fish Toxicity
  - Coldwater Fish Species
  - Warmwater Fish Species
Acute Toxicity to Freshwater Invertebrates
Acute Toxicity to Estuarine and Marine Organisms -
  Fish, Mollusks, and Shrimp
Fish Early Life Stage
Aquatic Invertebrate Life-Cycle
Fish Life Cycle (Reserved)
Aquatic Organism Accumulation (Reserved)
  Crustacean, Fish, Insect Nymph, and Mollusk
Simulated Field Testing - Aquatic Organisms (Reserved)
Actual Field Testing - Aquatic Organisms (Reserved)

Environmental Fate/Exposure

Hydrolysis
Photodegradation in Water
Photodegradation in Soil
Photodegradation in Air (Reserved)
Metabolism - Aerobic Soil
Metabolism - Anaerobic Soil
Metabolism - Anaerobic Aquatic
Metabolism - Aerobic Aquatic
Leaching and Adsorption/Desorption
Volatility, Laboratory
Volatility, Field (Reserved)
Dissipation Studies in Soil
Dissipation Studies in Aquatic Sediment
Dissipation Studies Soil, Long-Term (Reserved)
Accumulation Studies - Rotational Crops, Confined
Accumulation Studies - Rotational Crops, Field (Reserved)
Accumulation Studies - Irrigated Crops
Accumulation Studies - Fish
Accumulation Studies - Aquatic Nontarget Organisms
Reentry Protection - Foliar Dissipation
Reentry Protection - Dermal Exposure
Reentry Protection - Inhalation Exposure

*Reserved means the requirement is qualified, pending further information that may or may not indicate that the data is required. Tier testing may be involved (see EPA PR Notice 85-5).

Product Chemistry

Description of Beginning Materials and Manufacturing Process
Discussion of Formation of Impurities
Preliminary Analysis of Product Samples
Certification of Ingredient Limits
Analytical Methods to Verify Certified Limits
Physical and Chemical Characteristics:
  Color
  Physical State
  Odor
  Melting Point
  Density, Bulk Density, or Specific Gravity
  Solubility
  Dissociation Constant
  Octanol/Water Partition Coefficient
  pH
  Stability

Residue Chemistry

Nature of Residues in Plants
Nature of Residues in Livestock
Residue Analytical Method for Plant Residues
Residue Analytical Method for Animal Residues
Storage Stability Data
Magnitude of Residues for Each Food Use
  Bulb Vegetable Group:
    - Garlic, Leeks, Onions (dry bulb)
    - Onion (green) and Shallots
  Leafy Vegetables (except Brassica Vegetables) Group:
    - Celery and Lettuce
  Fruiting Vegetables (except Cucurbits) Group:
    - Tomatoes
  Cucurbit Vegetable Group:
    - Cucumbers, Melons, Pumpkins, Squash (summer), Squash (winter)
  Citrus Fruit Group:
    - Grapefruit, Lemons, and Oranges
  Pome Fruits Group:
    - Apples and Crabapples
  Stone Fruit Group:
    - Cherries
  Small Fruit and Berries Group:
    Blackberries, Blueberries, Boysenberries, Cranberries, Currants, Dewberries, Gooseberries, Grapes, Huckleberries, Loganberries, Raspberries, and Strawberries
  Avocado
  Kiwifruit (pending use)

4. The Agency has also determined that certain label restrictions and revisions are necessary. These include:

Ingredient Statement
Precautionary Statements
Environmental Hazards Statements
Use of Water from Treated Cranberry Bogs
Applicator Restriction for Greenhouse Uses
Protective Clothing Requirements
Reentry Interval
Signal Word Revision

The Regulatory Position and Rationale section discusses the Agency's position on each of these restrictions and the Required Labeling section contains the specific wording required for each of the labeling revisions.

B. PRELIMINARY RISK ASSESSMENT

Numerous data gaps exist for folpet and few definitive conclusions can be made pending receipt of the required data. The following assessment is based on the data available and, therefore, is subject to change.

1. Acute Toxicity. Adequate data are not available to determine conclusively the acute toxicity of folpet. However, based on the available acute eye irritation data, folpet is classified as a Toxicity Category II pesticide and must bear labeling with the signal word "WARNING".

   Studies with rabbits indicate that technical folpet causes reversible corneal opacity that can be prevented by immediately washing the exposed eyes.

   Acceptable data are not available to satisfy the testing requirement for acute inhalation toxicity. The data which are available indicate that the 4-hour LC_{50} in rats is 1.3 to 5.0 mg/L, and in mice is greater than 6 mg/L. An acceptable acute inhalation study is required.

   The acute oral LD_{50} in mice is 2.44 g/kg, in male rats is 43.8 g/kg, and in female rats is 19.5 g/kg. The acute dermal LD_{50} for rabbits is greater than 5.0 g/kg, the only dose tested.

   Studies with rabbits indicate that technical folpet does not cause primary skin irritation. It is however, a skin sensitizer.

2. Subchronic Toxicity. Adequate data are not available to determine conclusively the subchronic toxicity of folpet.

   A 90-day feeding study in the rat demonstrated decreased growth, decreased relative brain weights, decreased total blood protein, and histological evidence of irritation to the stomach after exposure to dietary concentrations of 10,000 ppm (1000 mg/kg/day), the highest dose tested. The NOEL for these effects was 3000 ppm (300 mg/kg/day).

   A 90-day feeding study in which dogs were administered technical folpet by capsule demonstrated that a dose of 4000 mg/kg/day could not be tolerated, as all males and 1/4 females were sacrificed in a moribund condition. Dose-related decreases in weight gain were noted in all treated dogs; a NOEL for this effect was not established at the lowest dose tested (LDT) of 790 mg/kg/day. A dose-related increase in testicular atrophy was also noted at all doses tested; a NOEL for this effects was not established.

There are no data available on subchronic dermal toxicity. A subchronic dermal study is required because folpet has registered indoor and outdoor domestic uses that can result in dermal exposure.

There are no data on subchronic inhalation toxicity of folpet; the need for such data will be determined after an acceptable acute inhalation toxicity study is submitted and reviewed.

3. Chronic Feeding/Oncogenicity Data. A chronic feeding study in rats is not acceptable at present; additional data are required to make that study acceptable. In that study a dose-related increase in the incidence of hyperkeratosis/acanthosis, erosion and ulceration of the stomach were noted in mid- and high-dose males and females. The NOEL for these lesions was 200 ppm (the lowest dose tested). Until the analysis of test diets and an explanation of the findings of "medullary tubule hyperplasia of the ovary, spongiosis hepatis and foci of vacuolated hepatocytes of the liver" are submitted, the NOEL is considered tentative. Deadline for submission of these data are within three (3) months from the registrants' receipt of this Registration Standard.

A one-year chronic oral toxicity study in dogs at doses of 10, 60 and 120 mg/kg/day administered in gelatin capsules caused non-significantly reduced mean body weight gains in both males and females at 60 and 120 mg/kg/day. Mean food consumption was also reduced in these animals. Cholesterol, total protein, albumin, and globulin values were decreased in mid- and high-dose males and high-dose females. There were no organ weight changes or histologic findings that were considered to be associated with the doses of administered folpet. Based on changes in body weight and clinical biochemistry, the Lowest Observed Effects Level (LOEL) was 60 mg/kg/day, which results in a NOEL of 10 mg/kg/day.

A. Mouse Studies - Oncogenicity

In a CD-1 mouse oncogenicity study (Wong et al, MRID 125718) folpet caused a statistically significant, dose-related increase in the incidence of duodenal adenocarcinomas. The mice were fed a diet containing 0, 1000, 5000, and 12000 ppm (0 mg/kg, 142.9 mg/kg, 714.5 mg/kg, and 1714.8 mg/kg, respectively). The oncogenic effect occurred in both sexes with an incidence of about 50 percent at the highest dose tested, which was 10,000 ppm (1429 mg/kg) when calculated on a time-weighted average dose using analytical diet concentrations.

This tumor was not observed in any control mice in this study. Duodenal adenocarcinoma is an uncommon tumor in CD-1 mice, and was observed mainly in animals at final sacrifice, although this tumor was noted in animals that died during the test as early as week 55 for males and week 79 for females. The treatment did not affect survival of the mice. The tumors noted in the duodenum were accompanied by a large increase in the incidence of mucosal hyperplasia, a preneoplastic change, in all treatment groups. A NOEL for this effect was not established because the incidence was statistically increased in all dose groups.

An apparent dose-related increase in the incidence of papilloma of the stomach, a benign tumor, was also noted in this study in mid- and high-dose males, but not females. This increase was statistically significant by the trend test; however, pair-wise comparisons did not yield a significant result. A similar dose-related increase in the incidence of mucosal hyperplasia and other concurrent toxicity to the stomach was not noted in either sex.

A virtually identical response was observed in a 2-year feeding study conducted with the B6C3F1 mouse (Rubin, MRID 151075), in which animals were exposed to diets containing 0, 1000, 3500, and 7000 ppm (0 mg/kg, 142.9 mg/kg, 500.1 mg/kg, and 1000.3 mg/kg, respectively) of folpet.

A dose related increase in the incidence of duodenal adenocarcinomas was observed in all test groups. The observed incidence was about 50% at the highest dose tested in both males and females. This tumor was noted only in treated mice, and was not observed in any control animals.

The observed oncogenic response in the duodenum was accompanied by a dose-related increase in the incidence of hyperplasia and proliferation of duodenal mucosal glands, which was noted in all male and female treatment groups, but not in any control animals. A NOEL for mucosal hyperplasia was not established in this study.

A statistically significant increase in the incidence of papillomas of the nonglandular stomach was also noted in high-dose females, which was significant for trend as well as by pair-wise comparison. This effect was accompanied by an increased incidence of hyperkeratosis/acanthosis of the esophagus and nonglandular mucosa of the stomach, which was noted in all male and female treatment groups, with no reported incidence in control animals.

In addition to the response in the gastrointestinal tract, an increased incidence of malignant lymphoma was noted in high-dose females (41%, as compared to an incidence of about 25% in control, low- and mid-dose groups). This effect was statistically significant ($p < 0.005$).

B. Rat Studies - Oncogenicity

In an oncogenicity study in Sprague-Dawley rats, diets containing 0, 200, 800, and 3200 ppm (0 mg/kg, 10 mg/kg, 40 mg/kg, and 160 mg/kg, respectively) of folpet did not cause an oncogenic response. A second oncogenicity study in the rat is currently under review.

C. Oncogenicity Classification

On the basis of the clear oncogenic response in two mouse studies with two strains of mice, the demonstrated genotoxicity of folpet, and structural similarity to the oncogen captan, the Agency concluded that folpet should be classified as a group B2 oncogen (probable human carcinogen) under the Agency's Guidelines for Carcinogen Risk Assessment (51 Federal Register 33992, September 24, 1986).

D. Risk of Oncogenicity

1. Dietary

A $Q_1{}^*$ of 3.49×10^{-3} has been calculated for the CD-1 mouse study. The results of the B6C3F1 mouse study were similar. Based on the estimated exposure from residues at tolerance levels of 0.09 mg/kg/day (obtained under the "Food Factor" system), and assuming 100% of all foods have tolerance level residues and 100% of the crop is treated with folpet, the cancer risk from dietary exposure to folpet is calculated as:

$$\text{Risk} = \text{Exposure} \times Q_1{}^* = 0.09 \times 3.49 \times 10^{-3} = 3.1 \times 10^{-4}$$

The Agency is requiring residue data for each of the registered crop uses of folpet. These data are required to be submitted within 42 months after receipt of this Standard by the registrant. The dietary risks are expected to be lower than that presented above, when dietary risks are calculated based on actual residues of folpet.

Information from monitoring studies conducted by the Food and Drug Administration (FDA) and by the National Food Processor's Association (NFPA), support the Agency's expectation that dietary risks will be significantly reduced based on actual residues in food, and percent of crop treated. Using the residue levels of folpet reported by FDA and NFPA from sampling of raw agricultural commodities, and considering percent of crop treated, the oncogenic risk from dietary exposure to folpet is calculated to be 7×10^{-6}. The information from FDA and NFPA is a result of random sampling of raw agricultural commodities and is, therefore, incomplete. After receipt and review of the residue data required through this Registration Standard, the Agency will be able to more accurately calculate the dietary oncogenic risks from folpet use.

2. Dermal Exposure (mixers/loaders/applicators)

To determine the estimated dermal absorption of folpet the Agency reviewed 1) data on structurally similar chemicals (i.e., captan and captafol) and 2) an unpublished study (MRID 40199101) which assessed the dermal penetration potential of 14 chemicals (including folpet). While this study is not sufficient to fulfill guideline requirements it can be used to perform a preliminary assessment of the dermal penetration potential of folpet. A dermal penetration study on folpet is being required through this Registration Standard.

These data indicate that the appropriate value for dermal risk calculation is 2.7% absorption over 72 hours. Using the Agency's average exposure estimates of 7 mg/kg and a duration of exposure of 11.3 hours, the dermal penetration potential was corrected by a factor of 11.3/72, resulting in a value of 0.42% dermal penetration of folpet.

An analysis of dermal exposure to mixers, loaders, and applicators showed that the greatest chronic exposure results from the treatment of grapes, 24.8 mg/kg/yr. This value is due solely to dermal exposure. The analysis was based on an assumption that there would be insignificant exposure from inhalation. Based on 0.42% dermal penetration and the Q_1^* of 3.49×10^{-3} the oncogenic risk to mixers, loaders and applicators is calculated as follows:

$$\text{Cancer Risk} = \text{Exposure} \times Q_1^*$$

$$\text{Cancer Risk} = \frac{24.8\ \text{mg/kg/yr}}{365\ \text{days/yr}} \times 0.42\% \times 3.49 \times 10^{-3}$$

$$= 9.95 \times 10^{-7}$$

The risk calculated above is based on the incidence of duodenal tumors observed in the mouse feeding studies. As the half-life of folpet *per se* in blood is approximately one minute, there is little likelihood in the Agency's opinion that dermal exposures could result in duodenal tumors. However, the induction of skin tumors as a result of dermal exposures is a possibility that must be considered. Further, a high degree of skin toxicity (hyperkeratosis, and other effects) was noted in the mouse oncogenicity study, which suggests that skin may also be a target for folpet toxicity in exposed humans.

4. Developmental Toxicity Acceptable studies have been submitted in two species to satisfy this Guideline requirement. These studies are discussed below.

A. Developmental Effects Toxicity Studies

A teratology study in the rat tested the effects of 0, 10, 60, and 360 mg/kg/day by gavage. No evidence of teratogenicity was noted at the highest dose tested of 360 mg/kg/day. The NOEL for maternal toxicity was 10 mg/kg/day based on decreased body weight gain and increased incidence of clinical signs of toxicity at doses of 60 and 360 mg/kg/day. The NOEL for developmental toxicity was established as 60 mg/kg/day based on slight increases in ossification delay observed in fetuses from high-dose dams. Although this finding has minimal toxicological relevance and was not statistically significant, it is considered to be treatment-related.

A teratology study in the New Zealand White rabbit tested the effects of 0, 10, 20, and 60 mg/kg/day by gavage, and demonstrated a teratogenic response in the form of hydrocephalus and altered development of skull bones (irregularly shaped fontanelles, holes in parietal bones). An increased incidence of these effects was noted in fetuses of mid- and high-dose animals. The NOEL for developmental toxicity is therefore, 10 mg/kg/day. Maternal toxicity in the form of decreased food consumption and body weight gain was also noted in mid- and high-dose rabbits; the NOEL for maternal toxicity is also 10 mg/kg/day.

A second teratology study in the New Zealand White rabbit assessed the developmental effects of 60 mg/kg/day administered by gavage in a "pulse dosing" schedule. In this study, the dose (60 mg/kg/day) previously demonstrated to produce hydrocephalus (when administered over the entire gestation period) was administered to different groups of rabbits for 3-day periods during gestation. A treatment-related increase in the incidence of hydrocephalus was not produced by this treatment paradigm; however, increases in the incidence of "irregularly shaped fontanelles" were observed in rabbits dosed over days 13 to 15 of gestation. Maternal toxicity in the form of alterations in food consumption and weight gain was also noted in treated does. Since only a single dose was tested, 60 mg/kg/day, a NOEL for developmental toxicity was not established in this study.

A teratology study conducted in HY/CR rabbits tested the developmental effects of folpet when administered at doses of 10, 40, and 160 mg/kg/day by gavage over days 7 to 19 of gestation. The NOEL for developmental toxicity was tentatively established as 10 mg/kg/day, based on findings of delayed ossification at 40 mg/kg/day. The NOEL for maternal toxicity was established as 40 mg/kg/day, based on clinical signs and decreases in body weight gain at 160 mg/kg/day. The NOEL's are provisional values pending further clarification by the registrants of some of the effects noted in the study.

B. Risk of Developmental Effects

1. Dietary

Developmental effects toxicity of folpet was demonstrated in the rabbit teratology study discussed above. The risk of this hazard was analyzed using the Tolerance Assessment System (TAS) (Saunders, et al, 1986, Introduction to the Tolerance Assessment System, an EPA Publication). The acute (single-day) exposure to folpet from consumption of food containing tolerance level residues was determined for females aged 13 years and older. The average single-day dietary exposure for this group was calculated to be 0.11 mg/kg/day. Using the NOEL of 10 mg/kg/day for maternal and developmental toxicity in the rabbit teratology study, this exposure results in a Margin-of-Safety (MOS) of 90 for the average consumer of foods (containing residues at tolerance levels) in this population subgroup.

If the distribution of food consumption within this subgroup is considered, the TAS analysis indicates that 15% of the subpopulation is predicted to have a single-day intake of 0.2 mg/kg/day or greater, and the highest 5% of the consumers in this subpopulation is predicted to have a single-day intake of 0.3 mg/kg/day or greater. These exposures result in MOS's of 50 and 33, respectively. As these values are based on tolerance levels rather than actual residues in or on food at the time of consumption, a more meaningful dietary risk assessment for developmental hazard would require better estimates of actual residues of folpet that are consumed with food. The Agency will refine its dietary risk assessment when additional data are submitted and reviewed.

2. Mixers/Loaders/Applicators

An acute exposure analysis performed by the Agency indicates that an acute exposure of 7 mg/kg/day would be predicted for a mixer/loader/applicator. This exposure would result in a MOS of 340 based on 0.42% dermal penetration and the NOEL for developmental toxicity of 10 mg/kg/day noted in the two rabbit studies.

The highest predicted acute dermal exposure from homeowner uses is 0.05 mg/kg/day, which produces a MOS of 47,000 based on 0.42% dermal penetration.

There are no exposure data available to estimate developmental risks to applicators of paint and stain end-use products containg folpet. Exposure data which are being required through this Registration Standard will allow the Agency to more realistically assess the exposure and potential risk to this group of people.

Exposure of industrial workers to folpet may occur during addition of folpet formulations to paints, stains, and PVC products. No exposure data are available for folpet use in factory settings. However, information on exposure potential to captan (a structurally related chemical which is also used as a paint and plastic additive) indicates that exposure in this setting will be negligible when gloves, protective clothing, respiratory protective devices, and work area ventilation are employed. Protective measures such as these are commonly prescribed by the Occupational Safety and Health Administration which has the authority to set work place standards in paint, stain, and plastics manufacturing plants.

Risks to mixers, loaders, and applicators of agricultural and commercial ornamental plant uses will be reduced by requiring each to wear minimal protective clothing (including long sleeved shirt, long pants, and (if the product is a dust, granular, or wettable powder) a dust mask. Prohibition on entering treated areas within 24 hours after application without protective clothing will reduce exposure of workers to folpet. These risk reduction measures are found in Section D, Required Labeling.

5. Reproduction. A two-generation reproduction study in the rat tested the effect of diets containing 0, 200, 800, and 3600 ppm of folpet. A NOEL for developmental/reproductive toxicity was based on decreased fertility and decreases in pup body weight gain in second generation (F1) rats fed diets containing 3600 ppm nominal (3200 ppm actual, which is corrected for percentage of active ingredient and breakdown based on analysis of feed, equivalent to 160 mg/kg/day). The NOEL for parental toxicity was 800 ppm nominal (690 ppm actual, equivalent to 34.5 mg/kg/day).

A mouse somatic cell mutation assay, which is in essence a one-generation feeding study, demonstrated statistically significant decreases in mouse pup survival at all dose levels, with a LOEL of 76 ppm (10.9 mg/kg/day), the lowest dose tested. It is possible that the NOEL for this apparent effect will be lower in the mouse than the value ultimately established in the rat, especially since histopathological examinations were not conducted in the mouse study which may have revealed other toxic effects. Historical control data for the mouse reproductive effects have been received, but not reviewed. If these data do not resolve all questions concerning potential reproductive toxicity in the mouse, additional studies in the mouse will be required to further evaluate the effect.

Exposure of industrial workers to folpet may occur during addition of folpet formulations to paints, stains, and PVC products. No exposure data are available for folpet use in factory settings. However, information on exposure potential to captan (a structurally related chemical which is also used as a paint and plastic additive) indicates that exposure in this setting will be negligible when gloves, protective clothing, respiratory protective devices, and work area ventilation are employed. Protective measures such as these are commonly prescribed by the Occupational Safety and Health Administration which has the authority to set work place standards in paint, stain, and plastics manufacturing plants.

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6. Mutagenicity. Folpet is mutagenic in Salmonella, E. Coli, mouse lymphoma cells and in the in vivo, Drosophila sex-linked, recessive lethal assay. Folpet is mutagenic in these test systems without metabolic activation. Metabolic activation with rat liver S-9 fraction generally diminishes the mutagenic activity of folpet.

Folpet was negative for in vivo gene mutations in the mouse somatic cell mutation assay (mouse spot test). However, significant pup mortality was noted in this assay and further evaluation of this non-mutagenic finding is requried.

Folpet is negative for in vivo chromosome damage in the rat bone marrow cytogenetics assay and in the mouse dominant lethal assay.

Folpet was negative in the mouse micronucleus assay; however, the study was unacceptable due to inadequate dose levels.

Folpet was negative in the dominant lethal study in rats; however, the study was unacceptable due to the lack of a rationale for the selection of dose levels, and the lack of individual animal data.

Although acceptable in vivo studies have been submitted, because of the demonstrated lability of folpet in blood, and the fact that this compound has been shown to cause intestinal tumors, additional testing for chromosomal aberrations in an in vivo test system is required to further elucidate the genotoxic properties of folpet.

Folpet is positive in B. subtilis and E. coli DNA repair assays, and in yeast for mitotic recombination. Metabolic activation either had no effect or decreased mutation frequency in the yeast assay (metabolic activation is not routinely employed in the bacterial DNA repair assay).

C. OTHER SCIENCE FINDINGS

1. Environmental Fate. Environmental fate data are limited to two hydrolysis studies, two photodegration in soil studies, and one mobility (leaching adsorption/desorption) study. None of these studies are adequate to assess the environmental fate of folpet. There are no acceptable environmental fate data that meet EPA Guideline requirements. The required environmental fate data under this Registration Standard are listed in the Appendix in Table A.

2. Ecological Effects. Adequate data to meet EPA Guideline requirements are available for the following studies:

   Acute Oral Toxicity for Upland Game Bird Species
   Subacute Dietary Study - Bobwhite quail
   Subacute Dietary Study - Mallard duck
   Avian Reproduction Study - Bobwhite quail
   Avian Reproduction Study - Mallard duck
   Freshwater Fish Toxicity - Coldwater fish on Typical End-Use Product

   Acute oral toxicity studies indicated that folpet is slightly toxic to upland game bird species. Subacute dietary toxicity studies with bobwhite quail and mallard duck also indicate that folpet is slightly toxic to birds when it was ingested in the diet of these birds. The avian reproduction studies indicate that technical folpet is not expected to cause reproductive impairment.

   Supplementary data indicate that technical folpet may be very highly toxic to invertebrates. Data from a study with a typical end-use product of folpet indicate that folpet is toxic to aquatic invertebrates.

   Studies with typical end-use products indicate that folpet is highly toxic to both rainbow trout and bluegill sunfish. Rainbow trout was the most sensitive species and the folpet product tested was classified in the very highly toxic range of toxicity for this species.

   Available data on pesticides which have use-patterns similar to folpet and which have been reviewed in consultation with the Office of Endangered Species suggest the use of folpet may harm endangered species. The Agency will consult with the Office of Endangered Species to determine whether currently registered uses of folpet will place endangered species in jeopardy. If this consultation indicates that endangered species are likely to be jeopardized from use of folpet, the Agency will develop labeling restrictions to protect these species.

   Folpet is relatively non-toxic to honeybees. Adequate data are available on the acute toxicity of folpet to honeybees.

D. TOLERANCE REASSESSMENT

The established tolerances for folpet are presently expressed as the fungicide folpet (N-(trichloromethylthio)phthalimide) without specifying the metabolites. The Agency has no data on the metabolism of folpet in plants. Metabolism studies with grapes, apples, and lettuce exposed to the maximum quantity permitted under existing registered labeling must be conducted to resolve this data gap. Both ring- and carbonyl-labeled C^{14} folpet must be used in these studies.

There are no established tolerances for folpet residues in animal fat, meat, and meat by-products, or in eggs or milk. There are no studies available on the metabolism of folpet in animals. Therefore, metabolism studies with ruminants and poultry using both ring- and carbonyl-labeled C^{14} folpet are needed at a level sufficient to make residue identification and quantification possible. Milk and eggs must be collected twice daily during the dosing period. Animals must be slaughtered within 24 hours of the final dosing. The distribution and characterization of residues must be determined in milk, eggs, liver, kidney, muscle, and fat. Metabolism studies utilizing carbonyl-labeled captan may be useful as a substitute for the required carbonyl-labeled studies with folpet because the carbonyl group is identical for both compounds.

The gas-liquid chromatography (GLC) method of analysis for folpet listed in the Pesticide Analytical Manual (PAM), Volume II, Section 180.191, which is specific for folpet, is acceptable for plant commodities. If additional metabolites of concern are found in plants or animals, adequate methods for analyzing the metabolites must be submitted.

The following table lists the present tolerances in parts per million (ppm) for residues of folpet:

Raw Agricultural Commodity	Residues of Folpet Parts per Million U.S.	Canada	Mexico	Codex
Apples	25	25	25	10
Avocados	25	25	25	-
Blackberries	25	25	-	-
Blueberries	25	25	-	25
Boysenberries	25	25	-	-
Celery	50	30	50	-
Cherries	50	25	-	15
Citrus Fruits	15	15	15	10
Crabapple	25	25	-	-
Cranberries	25	25	-	-
Cucumbers	15	15	15	2
Currants	25	25	-	-
Dewberries	25	25	-	-
Garlic	15	15	15	-
Gooseberries	25	25	25	-
Grapes	25	25	-	25
Huckleberries	25	25	-	-
Leeks	50	25	-	-
Lettuce	50	25	50	15
Loganberries	25	25	-	-
Melons	15	15	15	2
Onions (dry bulb)	15	25	15	2
Onions (green)	50	25	50	2
Pumpkins	15	15	-	-
Raspberries	25	25	-	15
Shallots	50	-	-	-
Squash (Summer)	15	15	15	-
Squash (Winter)	15	15	15	-
Strawberries	25	25	25	20
Tomatoes	25	25	3	5

The following table lists a request for EPA Pesticide Petition for establishing tolerances for residues of folpet.

Raw Agricultural Commodity	EPA Pesticide Petition No.	Proposed Parts per Million of Folpet U.S.	Canada	Mexico	Codex
Kiwifruit	4E3079	10	-	-	-

There are presently no data on the storage stability of residues of folpet and degradates of folpet in raw agricultural commodities derived from plants and animals. Information on the duration and conditions of sample storage prior to residue analysis and on the stability of folpet under the storage conditions used must be submitted to support established tolerances.

Data gaps exist for each of the raw agricultural commodities listed in the above tables. Of particular concern is the lack of data on the potential metabolites, the potential for residues of folpet to exist in processed commodities derived from these raw agricultural commodities, and the potential for residues in fat, meat, meat by-products, milk, and eggs of domestic animals. The data requirements to support established tolerances as listed in 40 CFR 180.191 are given in Table A, Appendix I.

There are no direct animal treatments for folpet on livestock or poultry. At the present time, it is not possible to calculate the maximum expected intake of folpet residues by dairy cattle, beef cattle, poultry, or swine. The only feed items of crops with registered uses are tomato pomace, grape pomace, citrus fruit pulp, and apple pomace; no tolerances exist for folpet residues in these commodities. If the required animal metabolism data demonstrate that detectable residues of concern may occur in animals from registered uses, then data quantitating the magnitude of the residue in animals will be required. Specific data requirements will be detailed at that time.

The Theoretical Maximum Residue Contribution (TMRC) from established tolerances is 7.362 mg/day (equivalent to an exposure of 0.1227 mg/kg/day for a 60 kg person) based on a 1.5 kg diet and a 60 kg person. Based on a one-year chronic oral toxicity study in dogs, the Provisional Acceptable Daily Intake (PADI) was established at 0.10 mg/kg/day, based on the NOEL of 10 mg/kg/day and a 100 fold uncertainty factor to account for data gaps and extrapolation from animal data to humans. The Maximum Permissible Intake (MPI) for a 60 kg person is, therefore, 6.0 mg/day. Using this value, existing tolerances utilize 123% of the PADI, based on non-oncogenic effects. The TMRC is a conservative estimate because it does not consider the effect of processing on residue levels in the raw agricultural commodities, that actual residue levels may be lower than the established tolerances, and that less than 100 percent of the crop is treated. Available FDA monitoring data for folpet indicate that actual residues are less than tolerance levels.

IV. REGULATORY ASSESSMENT

A. REGULATORY POSITIONS AND RATIONALES

Based on review and evaluation of all available data on folpet, the Agency has made the following determinations:

1. The Agency will not place Folpet into Special Review at this time.

   Rationale: Studies with folpet demonstrate that a) it is a probable human carcinogen (group B2), b) is a mutagenic agent in certain assays for mutagenicity, c) results in developmental effects (toxicity) in rabbits and may be a potential human teratogenic pesticide, and d) is highly toxic to fish (see Section III, Agency Assessment). However, data currently available to the Agency do not demonstrate that the risk is of concern in terms of the degree of risk to individual humans or the number of humans at some risk (Criteria for Initiation of Special Review, 40 CFR 154.7). Further, data are not available which demonstrate that use may result in residues in the environment which will equal or exceed concentrations acutely or chronically toxic to non-target organisms.

   a) Based on a Q_1* of 3.5×10^{-3} and the estimated Theoretical Maximum Residue Contribution obtained under the "Food Factor" system, the cancer risk from dietary exposure is 3.1×10^{-4}. This risk estimate is based on tolerance level residues and 100% of crop treated. As demonstrated by monitoring data provided by the Food and Drug Administration and the National Food Processors Association (see Section III, Agency Assessment), actual residues of folpet are likely to be significantly lower. When residue data required through this Registration Standard are received and reviewed, the Agency will reassess the risks from dietary exposure and consider whether further regulatory action is warranted. Oncogenic risks from dermal exposure are not considered likely because folpet's half-life in blood is only one minute.

   b) While folpet is a mutagenic agent in certain assays for mutagenicity and may have mutagenic potential in humans. Additional data must be submitted to evaluate the potential for mutagenicity of folpet. Specifically, an in vitro study of chromosome aberration must be submitted to the Agency to further evaluate the potential mutagenicity of folpet.

c) The Agency has calculated the single-day dietary exposure for females aged 13 years and older to be 0.11 mg/kg/day. Using the NOEL from the rabbit teratology study (10 mg/kg/day) for maternal and developmental toxicity, this exposure would result in a margin-of-safety (MOS) of 90.0 for developmental effects. As these values are based on tolerance level residues rather than actual residues on food, data are likely to indicate that the MOS is significantly higher.

When residue data are submitted as required by this Registration Standard, the Agency will recalculate the developmental effects risk from dietary exposure and determine whether further regulatory action is warranted.

Based on the NOELs for maternal and developmental toxicity; an acute exposure estimate of 7 mg/kg/day for mixers, loaders and applicators; and an assumed dermal absorption of 0.4%, the MOS for developmental effects for mixer, loaders, and applicators is 340. The highest predicted dermal exposure for homeowner use is 0.05 mg/kg/day resulting in a MOS of over 47,000.

d) While data demonstrate that folpet is highly toxic to fish the Agency lacks data to demonstrate whether exposure will be significant from currently registered uses of folpet. Data required through this Registration Standard will allow the Agency to reassess the risk to aquatic organisms and determine whether further regulatory action is necessary.

2. The Agency will not register any new food uses of folpet until additional residue chemistry and chronic toxicology data are submitted as required through this Registration Standard; are found to be acceptable for assessing the proposed uses; and demonstrate that the proposed uses will not result in unreasonable risk.

   Rationale: Based on available data the TMRC utilized 123% of the PADI. Until data are available to definitively demonstrate that residues do not occur at tolerance levels and to further define the potential risk from exposure, the Agency will not grant any food uses or tolerances. Existing regulations specify data requirements for food crop uses. As there are data gaps for existing food uses, no further food use registrations will be acceptable until these data gaps have been resolved.

3. In order to meet the statutory standard for continued registration, the Agency is requiring all folpet products to be labeled with the Signal Word "WARNING" and to bear appropriate labeling precautions for potential risk of hazard from eye exposure.

   Rationale: Technical folpet, in a primary eye irritation study with rabbits, caused corneal opacity that was present up to 7 days, but was not present after 10 days. The effects were prevented by immediately washing the eyes. Data are not available to assess the potential of other formulations containing less folpet to cause these effects. Until acceptable data are submitted which demonstrate that a particular product does not warrant classification as Toxicity Category II, all products containing folpet must bear labeling specified for Toxicity Category II, to protect against the potential eye hazard associated with folpet.

4. In order to meet the statutory standard for continued registration, the Agency is requiring an interim 24-hour reentry interval for agricultural crop uses of folpet until required reentry data have been submitted, evaluated and found to support a different reentry interval.

   Rationale: Folpet meets the toxicity criteria of 40 CFR 158.140 related to reentry restrictions because there is evidence which indicates that it is oncogenic, mutagenic and causes developmental effects. It also meets the exposure criteria for requiring a reentry period, because it is registered for uses which involve substantial exposure of agricultural workers to residues of folpet. Until data are submitted, as required in Appendix I, which demonstrate that either a longer or shorter reentry interval is appropriate for folpet, the interim 24-hour reentry interval will serve to reduce post-application exposure to folpet.

5. The Agency is requiring the following studies to support all existing tolerances in agricultural commodities: plant and animal metabolism, storage stability, and analytical methodology.

   Rationale: Metabolism of folpet in plants and animals has not been adequately defined. Plant and animal metabolites have not been quantified. No storage stability data are available for plant and animal tissues.

6. The Agency is requiring additional residue chemistry data for all established tolerances for folpet. Processing studies are required for tomato pomace, grape pomace, citrus fruit pulp, and apple pomace. If animal metabolism data demonstrate that detectable residues of concern may occur in animals from registered uses, then data quantitating the magnitude of the residue in animal tissues will be required.

   Rationale: Residue chemistry data gaps exist for these areas and such data are required to support the established tolerances for residues of folpet. These data are required to quantify human dietary exposure and for regulating the use of folpet to protect the public.

7. In order to meet the statutory standard for continued registration, the Agency is requiring the use of certain minimum protective clothing and equipment for manufacturing-use products (MPs) and end-use products (EPs). The required labeling language is found in Section IV.D. of this document.

   Rationale: Based on the potential risk of oncogenicity, developmental effects observed in the rabbit teratology studies and the positive mutagenicity studies, the Agency finds these requirements necessary to protect the public. The specific protective clothing and equipment requirements will reduce exposure to folpet products and decrease the risk of use.

8. In order to meet the statutory standard for continued registration, the Agency is requiring labeling of all MPs and all EPs to reflect the high toxicity of folpet to fish and to provide proper use precautions. The required labeling is found in Section IV.D. of this document.

   Rationale: Studies with fish demonstrate that folpet is highly toxic to rainbow trout and bluegill sunfish. Discharge of effluent containing folpet into lakes, streams, ponds, estuaries, oceans or public water must be regulated to minimize exposure to aquatic organisms.

9. In order to meet the statutory standard for continued registration, the Agency will require all products bearing directions for incorporation of folpet during manufacture of paints, building materials and fabrics to clearly indicate on the front panel that they are "For Industrial Use Only". Such products must not include uses other than those that are classifed as industrial uses as described in 40 CFR Part 158, Appendix A. 12.

Rationale: Industrial processes that incorporate folpet into manufactured products will result in negligible exposure to workers when gloves, protective clothing, respiratory protective devices and workplace ventilation are employed as commonly prescribed by OSHA (see Preliminary Risk Assessment, section III.B.4.). The Agency believes that users of folpet products in these industrial, manufacturing settings will be adequately protected from exposure based on OSHA standards. Since the labeling of folpet products intended for these uses will not carry any protective clothing requirements under FIFRA, the Agency must ensure that these products are not used outside the setting over which OSHA has workplace safety authority. Labeling which clearly states that these products are for industrial use only, will provide that assurance.

10. In order to meet the statutory standard for continued registration, the use-pattern for foliar application of folpet in the culture of cranberries must reflect use-precautions to protect fish and aquatic organisms in the neighboring areas. The required labeling language is found in Section IV.D. of this document.

Rationale: Studies with fish demonstrate that folpet is highly toxic to rainbow trout and bluegill sunfish. Drift from foliar applications of folpet to cranberries may be hazardous to fish and other aquatic organisms in the aquatic areas adjacent to the areas being treated.

11. While the data gaps are being filled currently registered MPs and EPs containing folpet as an active ingredient may be sold, distributed, formulated and used, subject to the terms and conditions specified in this Standard. Registrants must provide or agree to develop additional data, as specified in the Data Appendices of this document, in order to maintain existing registrations.

Rationale: Under FIFRA, the Agency may choose not to cancel or withold pesticide registration if data are missing or inadequate (See FIFRA sections 3(c)(2)(B) and 3(c)(7)).

Issuance of this Registration Standard provides a mechanism for identifying data needs. These data will be reviewed and evaluated, after which the Agency will determine if additional regulatory action is warranted.

B. CRITERIA FOR REGISTRATION

To be registered or reregistered under this Standard, products must contain folpet as the sole active ingredient, bear required labeling, and conform to the product composition, acute toxicity limits, and use pattern requirements listed in this section.

C. ACCEPTABLE RANGES AND LIMITS

1. Product Composition Standard

To be registered or reregistered under this Standard, manufacturing-use products (MPs) must contain folpet as the sole active ingredient. Each MP formulation proposed for registration must be fully described with an appropriate certification of limits, stating maximum and minimum amounts of the active ingredient and inert ingredients that are present in products, as well as impurities found at greater than 0.1%.

2. Acute Toxicity Limits

The Agency will consider registration of technical grade and manufacturing-use products containing folpet provided that the product labeling bears appropriate precautionary statements for the acute toxicity category in which each product is placed.

3. Use Patterns

To be registered under this Standard, manufacturing-use products may be labeled for formulation into end-use products only for the uses listed below. The Use Index lists all registered uses, as well as approved application rates and frequencies.

- Terrestrial food crops: apples, avocados, blackberries, blueberries, boysenberries, celery, cherries, citrus fruits, crabapples, cranberries, cucumbers, currents, dewberries, garlic, gooseberries, grapes, huckleberries, leeks, lettuce, loganberries, melons, onions (dry bulb), onions (green), pumpkins, raspberries, shallots, squash (summer), squash (winter), strawberries, and tomatoes.

- Domestic outdoor: ornamental plants, in paints and coatings, and in plastics as listed in the EPA Use Index.

- Domestic indoor: ornamental plants, in paints and coatings, and in plastics as listed in the EPA Use Index.

D. REQUIRED LABELING

All products must bear appropriate labeling as specified in 40 CFR 162.10 and PR Notices 83-2 and 83-3. Appendix II contains information on label requirements.

No pesticide product containing folpet may be released for shipment by the registrant after August 1, 1988 unless the product bears an amended label which complies with the requirements of this Standard.

No pesticide product containing folpet may be distributed, sold, offered for sale, held for sale, shipped, delivered for shipment, or received and (having been so received) delivered or offered to be delivered by any person after August 1, 1989 unless the product bears an amended label which complies with the requirements of this Standard.

In addition to the above, the following information must appear on the labeling of folpet products by the dates stated above for products relased for shipment and in commerce.

1. Ingredients Statement

The ingredient statement for MPs and EPs must identify the active ingredient as:

Active Ingredients	By Wt.
Folpet (N-(Trichloromethylthio) phthalimide)	%
Inert Ingredients	%

2. Precautionary Statements

a. All products, MPs and EPs, must bear the following precautionary statement:

"WARNING

Causes substantial but temporary eye injury. May cause an allergic skin reaction. Harmful if swallowed or inhaled. Do not get in eyes, on skin or on clothing. Avoid breathing dust or liquid aerosols. Wear goggles or face shield when handling. Wash thoroughly with soap and water after handling. Remove contaminated clothing and separately launder clothing before reuse."

3. Environmental Hazards Statements

a. Manufacturing-Use Products

All MP labeling must bear the following environmental hazard statement:

> "This product is highly toxic to fish. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public water unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA."

b. End-Use Product Statements

i. All EP labeling which permits foliar application and which does not contain directions for use on cranberries, must bear the following environmental hazard statement:

> "This pesticide is highly toxic to fish. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes."

ii. All EP labeling which permits foliar application and which does contain directions for use on cranberries, must bear the following environmental hazard statement:

> "This pesticide is highly toxic to fish. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes) except in the cultivation of cranberries. In all cases, drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes."

4. Use Statements and Worker Protection

a. Manufacturing Use Products - None

b. End Use Products - The following statements must be included in the "directions for use" as specified:

i. All EPs labeled for Agricultural Uses, Commercial Ornamental Plant Uses, and Greenhouse Uses must bear the following statement:

> "Wear goggles or face shield, long sleeved shirt and long pants when mixing, loading and applying this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and separately launder clothing before reuse."

ii. EPs in the form of a dust, granular, or wettable powder which are labeled for Agricultural Uses, Commercial Ornamental Plant Uses, and Greenhouse Uses must bear the following statement in addition to that specified in 4.b.i. above:

> "A dust mask or similar protection against particle inhalation must be worn when mixing, loading and applying this product."

iii. All EPs which are labeled for use in Commercial Greenhouses must bear the following statement in addition to the appropriate statements in 4.b.i and 4.b.ii. above:

> "Only the applicator is permitted to be in the greenhouse during application of folpet. Greenhouse vents must be open during application and remain open for at least 1 hour after application."

iv. All EPs labeled for Homeowner or Household Uses (Yards and Gardens, Houseplants) must bear the following statement:

> "Wear goggles or face shield when handling. Remove contaminated clothing and separately launder clothing before reuse. Wash thoroughly with soap and water after handling."

v. All EPs labeled for Agricultural Crop Use (except seed piece and plant propagule treatments) must bear the following statements:

"Do not enter treated areas for 24-hours after application unless wearing long sleeved shirt, long pants, and a dust mask or similar protection against particle inhalation."

"Water from cranberry bogs in which cranberry plants have been treated with folpet, must not be used for irrigation of crops unless folpet is registered for use on that crop."

vi. All EPs labeled for Industrial Use, for incorporation of folpet during the manufacture of paints, building materials and fabrics, must include the following statement on the front panel of the label:

"For Industrial Use Only"

Such product labeling may not include uses other than those classified as "industrial" uses as described in Appendix A.12. of 40 CFR Part 158.

5. Statements of Practical Treatment

All MPs and EPs must bear the following statements of practical treatment:

"If in eyes: Flush with plenty of water. Call a physician.
If swallowed: Promptly drink a large quantity of milk, egg whites, gelatin solution, or, if these are not available, drink large quantities of water. Do not drink alcohol."

V. PRODUCTS SUBJECT TO THIS STANDARD

All products containing one or more of the pesticides identified in Section II.A. are subject to certain requirements for data submission or changes in composition, labeling or packaging of the product. The applicable requirements depend on whether the product is a manufacturing or end use product and whether the pesticide is the sole active ingredient or one of multiple active ingredients.

Products are subject to this Registration Standard as follows:

A. Manufacturing use products containing this pesticide as the sole active ingredient are subject to:

1. The restrictions (if any) upon use, composition, or packaging listed in Section IV, if they pertain to the manufacturing use product.

2. The data requirements listed in Tables A and B[2]

3. The labeling requirements specified for manufacturing use products in Section IV.

4. Administrative requirements (application forms, Confidential Statement of Formula, data compensation provisions) associated with reregistration.

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[2] Data requirements are listed in the three Tables in Appendix I of this Registration Standard. The Guide to Tables in that Appendix explains how to read the Tables.

Table A lists generic data requirements applicable to all products containing the pesticide subject to this Registration Standard. Table B lists product-specific data applicable to manufacturing use products. The data in Tables A and B need not be submitted by a producer who is eligible for the formulator's exemption for that active ingredient.

Table C lists product-specific data applicable to end use products. The Agency has decided that, in most cases, it will not require the submission of product-specific data for end use products at this time. Therefore most Registration Standards do not contain a Table C.

B. Manufacturing use products containing this pesticide as one of multiple active ingredients are subject to:

The data requirements listed in Table A.

C. End use products containing this pesticide as the sole active ingredient are subject to:

1. The restrictions (if any) upon use, composition, or packaging listed in Section IV if they pertain to the end use product.

2. If eligible for the formulator's exemption[3], the data requirements listed in Table C.

3. If not eligible for the formulator's exemption, the data requirements listed in Table A and the data requirements listed in Table C.

4. The labeling requirements specified for end use products in Section IV.

D. End use products containing this pesticide as one of multiple active ingredients are subject to:

a. If not eligible for the formulator's exemption, the date requirements listed in Tables A and C.

b. If eligible for the formulator's exemption, the data requirements listed in Table C.

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[3] If you purchase from another producer and use as the source of your active ingredient only EPA-registered products, you are eligible for the formulator's exemption for generic data concerning that active ingredient (Table A) and product-specific data for the registered manufacturing use product you purchase (Table B).

Two circumstances nullify this exemption:

1) If you change sources of active ingredient to an unregistered product, formulate your own active ingredient, or acquire your active ingredient from a firm with ownership in common with yours, you individually lose the exemption and become subject to the data requirements in Table A.

2) If no producer subject to the generic data requirements in Table A agrees to submit the required data, all end use producers lose the exemption, and become subject to those data requirements.

VI. REQUIREMENT FOR SUBMISSION OF GENERIC DATA

This portion of the Registration Standard is a notice issued under the authority of FIFRA sec. 3(c)(2)(B). It refers to the data listed in Table A, which are required to be submitted by registrants to maintain in effect the registration of products containing this active ingredient.[4]

A. What are generic data?

Generic data pertain to the properties or effects of a particular active ingredient. Such data are relevant to an evaluation of all products containing that active ingredient regardless of whether the product contains other ingredients (unless the product bears labeling that would make the data requirement inapplicable).

Generic data may also be data on a "typical formulation" of a product. "Typical formulation" testing is often required for ecological effects studies and applies to all products having that formulation type. These are classed as generic data, and are contained in Table A.

B. Who must submit generic data?

All current registrants are responsible for submitting generic data in response to a data request under FIFRA sec. 3(c)(2)(B) (DCI Notice). EPA has decided, however, not to require a registrant who qualifies for the formulator's exemption (FIFRA sec. 3(c)(2)(D) and § 152.85) to submit generic data in response to a DCI notice if the registrant who supplies the active ingredient in his product is complying with the data request.

If you are granted a generic data exemption, you rely on the efforts of other persons to provide the Agency with the required data. If the registrants who have committed to generate and submit the required data fail to take appropriate steps to meet the requirements or are no longer in compliance with this data requirements notice, the Agency will consider that both they and you are not in compliance and will normally initiate proceedings to suspend the registrations of both your product(s) and their product(s) unless you commit to submit and submit the required data in the specified timeframe. In such cases, the Agency generally will not grant a time extension for submitting the data.

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[4] Registrations granted after issuance of this Standard will be conditioned upon submission or citation of the data listed in this Registration Standard.

If you are not now eligible for a formulator's exemption, you may qualify for one if you change your source of supply to a registered source that does not share ownership in common with your firm. If you choose to change sources of supply, the Confidential Statement of Formula must identify the new source(s) and you must submit a Formulator's Exemption Statement form.

If you apply for a new registration for products containing this active ingredient after the issuance of this Registration Standard, you will be required to submit or cite generic data relevant to the uses of your product if, at the time the application is submitted, the data have been submitted to the Agency by current registrants. If the required data have not yet been submitted, any new registration will be conditioned upon the new registrant's submission or citation of the required data not later than the date upon which current registrants of similar products are required to provide such data. See FIFRA sec. 3(c)(7)(A). If you thereafter fail to comply with the condition of that registration to provide data, the registration may be cancelled (FIFRA sec. 6(e)).

C. What generic data must be submitted?

You may determine which generic data you must submit by consulting Table A. That table lists the generic data needed to evaluate current uses of all products containing this active ingredient, the uses for which such data are required, and the dates by which the data must be submitted to the Agency.

D. How to comply with DCI requirements.

Within 90 days of your receipt of this Registration Standard, you must submit to EPA a completed copy of the form entitled "FIFRA Section 3(c)(2)(B) Summary Sheet" (EPA Form 8580-1, enclosed) for each of your products. On that form you must state which of the following six methods you will use to comply with the DCI requirements:

1. You will submit the data yourself.

2. You have entered into an agreement with one or more registrants to jointly develop (or share in the cost of developing) the data, but will not be submitting the data yourself. If you use this method, you must state who will submit the data on which you will rely. You must also provide EPA with documentary evidence that an agreement has been formed which allows you to rely upon the data to be submitted. Such evidence may be: (1) your letter offering to join in an agreement and the other registrant's acceptance of your offer, (2) a written statement by the parties that an agreement exists, or (3) a written statement by the person who will be submitting the data that you may rely upon its submission.

The Agency will also require adequate assurance that the person whom you state will provide the data is taking appropriate steps to secure it. The agreement to produce the data need not specify all of the terms of the final arrangement between the parties or a mechanism to resolve the terms.

If you and other registrants together are generating or submitting requested data as a task force or consortium, a representative of the group should request a Joint Data Submitter Number from the Registration Support and Emergency Response Branch, Registration Division. The request must include the following information:

a. A list of the members of the consortium;
b. The name and address of the designated representative of the consortium, with whom EPA will correspond concerning the data;
c. Identity of the Registration Standard containing the data requirement;
d. A list of the products affected (from all members of the consortium); and
e. Identification of the specific data that the consortium will be generating or submitting.

The Agency will assign a number to the consortium, which should be used on all data submissions by the consortium.

3. You have attempted to enter into an agreement to jointly develop data, but no other registrant has accepted your offer. You request that EPA not suspend your registration for non-compliance with the DCI. EPA has determined that, as a general policy, it will not suspend the registration of a product when the registrant has in good faith sought and continues to seek to enter into a data development/cost sharing program, but the other registrants developing the data have refused to accept its offer. [If your offer is accepted, you may qualify for Option 2 above by entering into an agreement to supply the data.]

In order to qualify for this method, you must:

1. File with EPA a completed "Certification of Attempt to Enter into an Agreement with other Registrants for Development of Data" (EPA Form 8580-6, enclosed).

2. Provide us with a copy of your offer to the other registrant and proof of the other registrant's receipt of your offer (such as a certified mail receipt). Your offer must, at a minimum, contain the following language or its equivalent:

> [Your company name] offers to share in the burden of producing the data required pursuant to FIFRA sec. 3(c)(2)(B) in the [name of active ingredient] Registration Standard upon terms to be agreed or failing agreement to be bound by binding arbitration as provided by FIFRA section 3(c)(2)(B)(iii).

The remainder of your offer may not in any way attempt to limit this commitment. If the other registrant to whom your offer is made does not accept your offer, and if the other registrant informs us on a DCI Summary Sheet that he will develop and submit the data required under the DCI, then you may qualify for this option. In order for you to avoid suspension under this method, you may not later withdraw or limit your offer to share in the burden of developing the data.

In addition, the other registrant must fulfill its commitment to develop and submit the data as required by this Notice in a timely manner. If the other registrant fails to develop the data or for some other reason would be subject to suspension, your registration as well as that of the other registrant will normally be subject to initiation of suspension proceedings, unless you commit to submit and submit the required data in the specified timeframe. In such cases, the Agency generally will not grant a time extension for submitting the data.

4. You request a waiver of the data requirement. If you believe that a data requirement does not (or should not) apply to your product or its uses, you must provide EPA with a statement of the reasons why you believe this is so. Your statement must address the specific composition or use factors that lead you to believe that a requirement does not apply. Since the Agency has carefully considered the composition and uses of pesticide products in determining that a data requirement applies, EPA does not anticipate that many waivers will be granted. A request for waiver does not extend the timeframes for developing required data, and if your waiver request is denied, your registration may be suspended if you fail to submit the data.

5. You request that EPA amend your registration by deleting the uses for which the data are needed. You are not required to submit data for uses which are no longer on your label.

6. You request voluntary cancellation of the registration of your product(s) for which the data are needed.

E. Testing Protocols, Standards for Conducting Acceptable Tests, Guidance on Evaluating and Reporting Data.

All studies required under this Notice must be conducted in accordance with test standards outlined in the Pesticide Assessment Guidelines, unless other protocol or standards are approved for use by the Agency in writing.

As noted herein, these EPA Guidelines, which are referenced in the Data Tables, are available from the National Technical Information Service (NTIS), Attn: Order Desk, 5285 Port Royal Road, Springfield, VA 22161 (tel: 703-487-4650).

Protocols approved by the Organization for Economic Cooperation and Development (OECD) are also acceptable if the OECD-recommended test standards conform to those specified in the Pesticide Data Requirements regulation (Part 158.70). Please note, however, that certain OECD standards (such as test duration, selection of test species, and degradate identification which are environmental fate requirements) are less restrictive than those in the EPA Assessment Guidelines listed above. When using the OECD protocols, they should be be modified as appropriate so that the data generated by the study will satisfy the requirements of Part 158. Normally, the Agency will not extend deadlines for complying with data requirements when the studies were not conducted in accord with acceptable standards. The OECD protocols are available from OECD, 1750 Pennsylvania Avenue, N.W., Washington, D.C. 20006.

F. Procedures for requesting a change in testing protocol.

If you will generate the required data and plan to use test procedures which deviate from EPA's Pesticide Assessment Guidelines or the Reports of Expert Groups to the Chemicals Group, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must submit for EPA approval the protocols you propose to use.

You should submit your protocols before beginning testing, because the Agency will not ordinarily accept as sufficient studies using unapproved protocols. A request for protocol approval will not extend the timeframe for submission of the data, nor will extensions generally be given to conduct studies due to submittal of inappropriate protocols.

G. Procedures for requesting extensions of time.

If you think that you will need more time to generate the data than is allowed by EPA's schedule, you may submit a request for an extension of time. Any request for a time extension which is made as an initial response to a section 3(c)(2)(B) request notice must be submitted in writing to the Product Manager listed at the end of this section and must be made by the 90-day deadline for response. Once dates have been committed to and EPA has accepted these commitments, any subsequent requests for a time extension must be submitted in writing to the Office of Compliance Monitoring at the address given in Section IX.E.

EPA will view failure to request an extension before the data submission response deadline as a waiver of any future claim that there was insufficient time to submit the data. While EPA considers your request, you must strive to meet the deadline for submitting the data.

The extension request should state the reasons why you believe that an extension is necessary and the steps you have taken to meet the testing deadline. Time extensions normally will not be granted due to problems with laboratory capacity or adequacy of funding, since the Agency believes that with proper planning these can be overcome.

A request for an extension does not extend the timeframe for submission of the data. If EPA denies your request for a time extension and you do not submit the data as requested, EPA may begin proceedings to suspend the registrations of your products.

H. PR Notice 86-5 and Any Other Requirements Referenced or Included Within this Notice.

All data submitted in response to this Notice must comply with EPA requirements regarding the reporting of data, including the manner of reporting, the completeness of results, and the adequacy of any required supporting (or raw) data, including, but not limited to, requirements referenced or included in this Notice or contained in PR Notice 86-5 (issued July 29, 1986).

I. Existing stocks provision upon suspension or cancellation.

The Agency has determined that if a registration is suspended for failure to respond to a DCI request under FIFRA sec. 3(c)(2)(B), an existing stocks provision is not consistent with the Act. Accordingly, the Agency does not anticipate granting permission to sell or distribute existing stocks of suspended product except in rare circumstances. If you believe that your product will be suspended or cancelled and that an existing stocks provision should be granted, you have the burden of clearly demonstrating to EPA that granting such permission would be consistent with the Act. The following information must be included in any request for an existing stocks provision:

1. Explanation of why an existing stocks provision is necessary, including a statement of the quantity of existing stocks and your estimate of the time required for their sale or distribution; and

2. Demonstration that such a provision would be consistent with the provisions of FIFRA.

VII. REQUIREMENT FOR SUBMISSION OF PRODUCT-SPECIFIC DATA

Under its DCI authority, EPA has determined that certain product-specific data are required to maintain your registrations in effect. Product-specific data are derived from testing using a specific formulated product, and, unlike generic data, generally support only the registration of that product. All such data must be submitted by the dates specified in this Registration Standard.

If you have a manufacturing use product, these data are listed in Table B. If you have an end use product, the data are listed in Table C. As noted earlier, the Agency has decided that it will not routinely require product-specific data for end use products at this time. Therefore, Table C may not be contained in this Registration Standard; if there is no Table C, you are not required to submit the data at this time.

In order to comply with the product specific data requirements, you must follow the same procedures as for generic data. See Section VI.D, E, F, and G. You should note, however, that product chemistry data are required for every product, and the only acceptable responses are options VI.D.1. (submit data) or VI.D.6.(cancellation of registration).

Failure to comply with the product-specific data requirements for your products will result in suspension of the product's registration.

VIII. REQUIREMENT FOR SUBMISSION OF REVISED LABELING

FIFRA requires each product to be labeled with accurate, complete and sufficient instructions and precautions, reflecting the Agency's assessment of the data supporting the product and its uses. General labeling requirements are set out in 40 CFR 162.10 (see Appendix II - LABELING and SUMMARY). In addition, labeling requirements specific to products containing this pesticide are specified in Section IV.D of this Registration Standard. Applications submitted in response to this notice must include draft labeling for Agency review.

If you fail to submit revised labeling as required, which complies with 40 CFR 162.10 and the specific instructions in Section IV.D., EPA may seek to cancel or suspend the registration of your product under FIFRA sec. 6.

IX. INSTRUCTIONS FOR SUBMISSION

A. Manufacturing Use Products (MUPs) containing the subject pesticide as sole active ingredient.

1. Within 90 days from receipt of this document, you must submit to the Product Manager in the Registration Division for each product subject to this Registration Standard:

a. The "FIFRA Section 3(c)(2)(B) Summary Sheet" (EPA Form 8580-1), with appropriate attachments.[5]

b. Confidential Statement of Formula (EPA Form 8570-4).

c. Formulator's Exemption Statement (EPA Form 8570-27), if applicable.

d. Evidence of compliance with data compensation requirements of FIFRA sec. 3(c)(1)(D). Refer to 40 CFR 152.80-152.99.

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[5] If on the Summary Sheet, you commit to develop the data, present arguments that a data requirement is not applicable or should be waived, or submit protocols or modified protocols for Agency review, you must submit a copy of the Summary Sheet (and any supporting information) to the Office of Compliance Monitoring, which will be monitoring the data generated in response to this notice. This submission is in addition to responding to the Product Manager, and should be submitted to the Office of Compliance Monitoring at the address given at the end of this section. (Actual studies are not to be submitted to the Office of Compliance Monitoring.)

2. Within 9 months from receipt of this document you must submit to the Product Manager:

a. Application for Pesticide Registration (EPA Form 8570-1).

b. Two copies of any required product-specific data (See Table B).

c. Three copies of draft labeling, including the container label and any associated supplemental labeling. Labeling should be either typewritten text on 8-1/2 x 11 inch paper or a mockup of the labeling suitable for storage in 8-1/2 x 11 files. The draft label must indicate the intended colors of the final label, clear indication of the front panel of the label, and the intended type sizes of the text.

d. Product Specific Data Report (EPA Form 8580-4).

3. Within the times set forth in Table A, you must submit to the Registration Division all generic data, unless you are eligible for the formulator's exemption. If for any reason any test is delayed or aborted so that the schedule cannot be met, immediately notify the Product Manager and the Office of Compliance Monitoring of the problem, the reasons for the problem, and your proposed course of action.

B. Manufacturing Use Products containing the subject pesticide in combination with other active ingredients.

1. Within 90 days from receipt of this document, you must submit to the Product Manager in the Registration Division:

a. FIFRA sec. 3(c)(2)(B) Summary Sheet, with appropriate attachments[5] (EPA Form 8580-1).

b. Confidential Statement of Formula (EPA Form 8570-4)

c. Formulator's Exemption Statement (EPA Form 8570-27), if applicable.

2. Within the time frames set forth in Table A, you must submit to the Registration Division all generic data, unless you are eligible for the formulator's exemption. If for any reason any test is delayed or aborted so that the schedule cannot be met, immediately notify the Product Manager and the Office of Compliance Monitoring of the problem, the reasons for the problem, and your proposed course of action.

C. End Use Products containing the subject pesticide as sole active ingredient.

1. Within 90 days from receipt of this document, you must submit to the Product Manager in the Registration Division.

a. FIFRA Section 3(c)(2)(B) Summary Sheet, with appropriate attachments[5] (EPA Form 8580-1).

b. Confidential Statement of Formula (EPA Form 8570-4).

c. Formulator's Exemption Statement (EPA Form 8570-27), if applicable.

2. Within 9 months from receipt of this document you must submit to the Product Manager:

a. Two copies of any product-specific data, if required by Table C.

b. Product Specific Data Report (EPA Form 8580-4), if Table C lists required product-specific data.

c. Three copies of draft labeling, including the container label and any associated supplemental labeling. Labeling should be either typewritten text on 8-1/2 x 11 inch paper or a mockup of the labeling suitable for storage in 8-1/2 x 11 files. The draft labeling must indicate the intended colors of the final label, clear indication of the front panel of the label, and the intended type sizes of the text. End use product labeling must comply specifically with the instructions in Section IV (Regulatory Position and Rationale).

D. Intrastate Products containing the subject pesticide either as sole active ingredient or in combination with other active ingredients.

These products are being called in for full Federal registration. Producers of these products are being sent a letter instructing them how to submit an application for registration.

E. Addresses

The required information must be submitted to the following address:

Richard F. Mountfort (PM 23)
Registration Division (TS-767C)
Office of Pesticide Programs
Environmental Protection Agency
401 M St., SW
Washington, D.C. 20460

The address for submissions to the Office of Commpliance Monitoring is:

Laboratory Data Integrity Program
Office of Compliance Monitoring (EN-342)
Environmental Protection Agency
401 M St., SW
Washington, D.C. 20460

APPENDIX I

DATA APPENDICES

TGUIDE-1

GUIDE TO TABLES

Tables A, B, and C contain listings of data requirements for the pesticides covered by this Registration Standard.

Table A contains generic data requirements that apply to the pesticide in all products, including data requirements for which a "typical formulation" is the test substance.

Table B contains product-specific data requirements that apply only to a manufacturing use product.

Table C contains product-specific data requirements that apply only to an end use product.

The data tables are generally organized according to the following format:

1. *Data Requirement* (Column 1). The data requirements are listed in the order in which they appear in 40 CFR Part 158. The reference numbers accompanying each test refer to the test protocols set out in the Pesticide Assessment Guidelines, which are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

2. *Test Substance* (Column 2). This column lists the composition of the test substance required to be used for the test, as follows:

TGAI = Technical grade of the active ingredient
PAI = Pure active ingredient
PAIRA = Pure active ingredient, radio labeled
TEP = Typical end use formulation
MP = Manufacturing use product
EP = End use product

Any other test substances, such as metabolites, will be specifically named in Column 2 or in footnotes to the table.

3. *Use pattern* (Column 3). This column indicates the use patterns to which the data requirement applies. Use patterns are the same as those given in 40 CFR Part 158. The following letter designations are used for the given use patterns:

A = Terrestrial, food
B = Terrestrial, non-food
C = Aquatic, food
D = Aquatic, non-food
E = Greenhouse, food
F = Greenhouse, non-food
G = Forestry
H = Domestic outdoor
I = Indoor

Any other designations will be defined in a footnote to the table.

4. Does EPA have data? (Column 4). This column indicates one of three answers:

YES - EPA has data in its files that completely satisfy this data requirement. These data may be cited by other registrants in accordance with data compensation requirements of Part 152, Subpart E.

PARTIALLY - EPA has some data in its files, but such data do not fully satisfy the data requirement. In some cases, the Agency may possess data on one of two required species, or may possess data on one test substance but not all. The term may also indicate that the data available to EPA are incomplete. In this case, when the data are clarified, or additional details of the testing submitted by the original data submitter, the data may be determined to be acceptable. If this is the case, a footnote to the table will usually say so.

NO - EPA either possesses no data which are sufficient to fulfill the data requirement, or the data which EPA does possess are flawed scientifically in a manner that cannot be remedied by clarification or additional information.

5. Bibliographic citation (Column 5). If the Agency has acceptable data in its files, this column lists the identifying number of each study. This normally is the Master Record Identification (MRID) number, but may be a GS number if no MRID number has been assigned. Refer to the Bibliography Appendices for a complete citation of the study.

6. Must additional data be submitted? (Column 6). This column indicates whether the data must be submitted to the Agency. If column 3 indicates that the Agency already has data, this column will usually indicate NO. If column 3 indicates that the Agency has only partial data or no data, this column will usually indicate YES. In some cases, even though the Agency does not have the data, EPA will not require its submission because of the unique characteristics of the chemical; because data on another chemical can be used to fulfill the data requirement; or because the data requirement has been waived or reserved. Any such unusual situations will be explained in a footnote to the table.

7. Timeframe for submission (Column 7). If column 5 requires that data be submitted, this column indicates when the data are to be submitted, based on the issuance date of the Registration Standard. The timeframes are those established either as a result of a previous Data Call-In letter, or standardized timeframes established by PR Notice 85-5 (August 22, 1985).

8. Footnotes (at the end of each table). Self-explanatory.

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test 1/ Substance	Use 2/ Patterns	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be 3/ Submitted?	(Time)
§158.135 Toxicology						
ACUTE TESTING:						
81-1 - Acute Oral - Rat	TGAI	A,B,C,D,E,F,G,H,I	Yes	00144057, 00137695	No	
81-2 - Acute Dermal	TGAI	A,B,C,D,E,F,G,H,I	Yes	00141728	No	
81-3 - Acute Inhalation - Rat	TGAI	A,B,C,D,E,F,G,H,I	No		Yes	(9 months)
81-4 - Eye Irritaion - Rabbit	TGAI	A,B,C,D,E,F,G,H,I	Yes	00160444	No	
81-5 - Dermal Irritation - Rabbit	TGAI	A,B,C,D,E,F,G,H,I	Yes	00160430	No	
81-6 - Dermal Sensitization	TGAI	A,B,C,D,E,F,G,H,I	Yes	00160431	No	
81-7 - Acute Delayed Neurotoxicity - Hen[4]	TGAI	N/A			N/A	
SUBCHRONIC TESTING:						
82-1 - 90-Day Feeding - -Rodent	TGAI	A,C,D,E,I	Yes	00115269	No	
-Non-rodent (dog)	TGAI	A,C,D,E,I	No		Yes[5]	(18 months)

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance 1/	Use Patterns 2/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted? 3/	(Time)
§158.135 Toxicology (Cont.)						
82-2 - 21-Day Dermal	TGAI	A,B,C,D,E,F,G,H,I	No		Yes	(12 months)
82-3 - 90-Day Dermal[4]	TGAI	N/A			No	
82-4 - 90-Day Inhalation Rat	TGAI	Reserved[6]			Reserved[6]	
82-5 - 90-Day Neurotoxicity-[4] Hen/Mammal	TGAI	N/A			No	
CHRONIC TESTING:						
83-1 - Chronic Toxicity - -Rodent, and	TGAI	A,C,D,E	Partially	00151560	Reserved[7]	
-Non-rodent			Yes	00161315	No	
83-2 - Oncogenicity Study - -Rat, and	TGAI	A,C,D,E	Yes	00151560	No	
-Mouse			Yes	00125718, 00151075	No	
83-3 - Teratogenicity - -Rat, and	TGAI	A,C,D,E	Yes	00132456, 00132457	No	
-Rabbit			Yes	00160432	No	
83-4 - Reproduction, 2-generation -Rat	TGAI	A,C,D,E	Yes	00151489	No	
-Mouse			Partially	00148625, 00149567	Reserved[8]	

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance 1/	Use Patterns 2/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted? 3/	(Time)
§158.135 Toxicology (Continued)						
MUTAGENICITY TESTING						
84-2 - Gene Mutation	TGAI	A,C,D,E	Yes	00160435,00132582,GS0630-001 00143567,00148625	No	
84-2 - Chromosomal Aberration	TGAI	A,C,D,E	Partially[9]	00153085,00132582	Yes	(12 months)
84-2 - Other Mechanisms of Mutagenicity	TGAI	A,C,D,E	Yes	00132582	No	
SPECIAL TESTING						
85-1 - General Metabolism	PAI or PAIRA	A,C,D,E	No		Yes	(24 months)
85-2 - Domestic Animal Safety[4]	Choice				No	
85-3 - Dermal Penetration	PAIRA	A,C,D,E	No		Yes	(12 months)

1/ Composition: PAI = Pure active ingredient; PAIRA = Pure active ingredient, radiolabelled; Choice = Choice of several test substances determined on a case-by-case basis.

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aqautic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.

3/ Data must be submitted within the number of months specified below, starting from date of receipt of this Standard.

4/ This study is not required.

5/ Additional subchronic toxicity will not be required if an acceptable chronic feeding study in a non-rodent species is submitted.

6/ This requirement is reserved pending submission and review of acute inhalation toxicity data.

7/ Data from a chronic toxicity study in a rodent species will be required 50 months from the date of reciept of this Standard, unless the following information regarding the rat study (EPA MRID 00151560) are submitted within 3 months from the date of receipt of this Standard and found acceptable: (a) results of diet analyses and (b) an explanation of the findings described as "medullary tubule hyperplasia of the ovary" and "spongiosis hepatis" of the liver, particularly as it relates to "fatty change" and "foci of vacuolated hepatocytes" in that tissue.

8/ Historical control data are required to complete the evaluation of reproductive effects in mice. If the additional data do not satisfy this data requirement, a new two generation reproductive study in mice must be submitted within 50 months from the date of receipt of this Standard.

9/ This requirement is only partially satisfied by the submitted in vivo studies. Additional testing for chromosomal aberrations in an in vitro test system is required.

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance[1]/	Use Pattern[2]/	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission[3]/
§158.145 Wildlife and Aquatic Organisms						
AVIAN AND MAMMALIAN TESTING						
71-1 - Acute Avian Oral Toxicity	TGAI	A,C,H	Yes Partially	00112793 00115198[4]/	No	
71-2 - Avian Subacute Dietary Toxicity	TGAI					
- Upland Game Bird, and		A,C,H	Yes	00112794	No	
- Waterfowl		A,C	Yes	00112795	No	
71-4 - Avian Reproduction	TGAI					
- Upland Game Bird, and		A,C	Yes[5]/	00098004	No	
- Waterfowl		A,C	Yes	00098005	No	
71-5 - Simulated Field Testing	TEP					
- Mammals, and		—	No		No	
- Birds		-	No		No	
- Actual Field Testing	TEP					
- Mammals, and		—	No		No	
- Birds		—	No		No	

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
§158.145 Wildlife and Aquatic Organisms - Continued						
AQUATIC ORGANISM TESTING						
72-1 - Freshwater Fish Toxicity - Coldwater Fish Species, and	TGAI	A,C,H	No	-	Yes6/	9 Months
	TEP8/	A,C	Yes	00160475	No	
			Yes	00160473		
	Degradate	A,C	Partially	GS0144-0127/	Yes	9 Months
			Partially	000740099/7/		
- Warmwater Fish Species	TGAI	A,C	No	-	Yes6/	9 Months
	TEP8/	A,C	Partially	00074010	Yes	9 Months
	Degradate	A,C	Partially	GS0144-0127/	Yes	9 Months
72-2 - Acute Toxicity to Freshwater Invertebrates	TGAI	A,C,H	No	-	Yes6/	9 Months
	TEP8/	A,C	Partially	00074008	Yes	9 Months
			Partially	00070507		
	Degradate	A,C	Partially	GS0144-0127/	Yes	9 Months
72-3 - Acute Toxicity to Estuarine and Marine Organisms10/	TGAI and Degradate					
- Fish		A	No	-	Yes6/	12 Months
- Mollusk		A	No	-	Yes6/	12 Months
- Shrimp		A	No	-	Yes6/	12 Months
72-4 - Fish Early Life Stage, and	TGAI and Degradate					
- Aquatic Invertebrate Life-Cycle11/		A	No	-	Yes	15 Months
72-5 - Fish - Life-Cycle	TGAI	A,B	No	-	Reserved12/	

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
§158.145 Wildlife and Aquatic Organisms - Continued						
72-6 - Aquatic Organism Accumulation	TGAI, PAI OR Degradation Product		No	-	Reserved	
- Crustacean						
- Fish						
- Insect Nymph						
- Mollusk						
72-7 - Simulated Field Testing - Aquatic Organisms	TEP	A,B	No	-	Reserved12/	
- Actual Field Testing -Aquatic Organisms	TEP	A,B	NO	-	Reserved13/	

1/ Composition: TGAI = Technical grade of the active ingredient; PAI = Pured active ingredient; TEP = Typical end-use product.

2/ The use patterns are coded as follows: A = Terrestrial, Food Crop; B = Terrestrial, Non-Food Crop; C = Aquatic, Food Crop; D = Aquatic, Non-Food; E = Greenhouse, Food Crop; F = Greenhouse, Non-Food; G = Forestry; H = Domestic Outdoors; I = Indoors.

3/ Data must be submitted no later than indicated below after receipt of this document.

4/ The study may meet guideline requirements if the stuy methodology were described.

GENERIC DATA REQUIREMENTS FOR FOLPET
Footnotes (continued)

Data Requirement	Composition1/	Use2/ Pattern	To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Date Be Submitted Under FIFRA Section 3(c)(2)(b)?3/

5/ Avian reproduction study is required since repeat applications are indicated for all crops.

6/ Due to the rapid degradation reported in the *Daphnia* study, MRID 00070507, flow-through studies are required to determine the toxicity of folpet.

7/ These studies may be used to represent degradate testing provided the outstanding environmental fate data indicate sufficient amounts of the degradate are available for the duration of the test period.

8/ Testing on the typical end-use product (TEP) can be required if the EEC is equal or greater than the LC_{50} or if direct application to water occurs when used as directed. The use on cranberries would meet the latter criteria and the use on citrus the first criteria.

9/ This study lacks pertinent data necessary to determine if the Guideline requirements have been fulfilled.

10/ Acute estuarine and marine studies are indicated for crops which are grown in excess of 300,000 acres in coastal counties. The use on citrus meets these criteria.

11/ Fish early life stage and aquatic invertebrate life-cycle study are required since all application rates will result in an EEC which will exceed the 1/100th of the LC_{50} and repeat applications every 7 days for the majority of crops.

12/ Reserve pending the results of the fish early life stage and aquatic invertebrate life-cycle studies and environmental fate data.

13/ Simulated or actual field testing - aquatic organisms study is reserved due to the lack of environmental fate data, fish early life stage and aquatic invertebrate, and acute fish and invertebrate LC_{50}.

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
§158.155 Nontarget Insect						
NONTARGET INSECT TESTING - POLLINATORS:						
141-1 - Honey bee acute contact toxicity	TGAI	A,B,H	Yes	00036935	No	
141-2 - Honey bee - toxicity of residues on foliage	TEP	A,B,H	No	________	No4/	
141-4 - Honey bee subacute feeding study	(Reserved)5/					
141-5 - Field testing for pollinators	TEP	A,B,H	No	________	No4/	

1/ Composition: TGAI = Technical grade of the active ingredient; TEP = Typical end-use product.
2/ The use patterns are coded as follows: A = Terrestrial, Food Crop; B = Terrestrial, Nonfood; C =Aquatic; Food Crop; D = Aquatic, Nonfood; E = Greenhouse, Food Crop; F = Greenhouse, Nonfood; G = Forestry; H = Domestic Outdoor; I = Indoor.
3/ Data must be submitted within the number of months specified below, starting from the date of receipt of this Registration Standard.
4/ As data from the acute contact study show low toxicity to honeybees, no faruther testing is required.
5/ Reserved pending development of test methodology.

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliograpic Citation	Must Additional Data be Submitted?	Time Frame for Submission
NONTARGET INSECT TESTING - AQUATIC INSECTS:						
142-1 - Acute toxicity to aquatic insects	(Reserved)6/					
142-1 - Aquatic insect life-cycle study	(Reserved)6/					
142-3 - Simulated or actual field testing for aquatic insects	(Reserved)6/					
143-1 thru 143-3 - NONTARGET INSECT TESTING - PREDATORS AND PARASITES	(Reserved)6/					

6/ Reserved pending Agency decision as to whether the data requiraemnt should be established.

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance[1]	Use Patterns[2]	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission[3]
§158.130 Environmental Fate						
DEGRADATION STUDIES-LAB:						
161-1 - Hydrolysis	TGAI or PAIRA	A,B,C,F,H	No		Yes	9 Months
Photodegradation						
161-2 - In water	TGAI or PAIRA	A,B,C	No		Yes	9 Months
161-3 - On soil	TGAI or PAIRA	A	No		Yes	9 Months
161-4 - In Air	TGAI or PAIRA	A	No		Reserved[4]	
METABOLISM STUDIES-LAB:						
162-1 - Aerobic Soil	TGAI or PAIRA	A,B,F,H	No		Yes	27 Months
162-2 - Anaerobic Soil	TGAI or PAIRA	A	No		Yes	27 Months
162-3 - Anaerobic Aquatic	TGAI or PAIRA	B,C,H	No		Yes	27 Months
162-4 - Aerobic Aquatic	TGAI or PAIRA	B,C,H	No		Yes	27 Months
MOBILITY STUDIES:						
163-1 - Leaching and Adsorption/Desorption	TGAI or PAIRA	A,B,C,F,H	No		Yes	12 Months
163-2 - Volatility (Lab)	TEP	A,F	No		Yes	12 Months
163-3 - Volatility (Field)	TEP	A,F	No		Reserved[4]	

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance	Use Patterns	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
§158.130 Environmental Fate - Continued						
DISSIPATION STUDIES-FIELD:						
164-1 - Soil	TEP	A,B,H	No		Yes	27 Months
164-2 - Aquatic (Sediment)	TEP	C	No		Yes	27 Months
164-3 - Forestry	TEP		No		No[5]	
164-4 - Combination and Tank Mixes			No		No[6]	
164-5 - Soil, Long-term	TEP	C	No		Reserved[7]	
ACCUMULATION STUDIES:						
165-1 - Rotational Crops (Confined)	PAIRA	A,C	No		Yes	39 Months
165-2 - Rotational Crops (Field)	TEP	A,C	No		Reserved[8]	
165-3 - Irrigated Crops	TEP	C	No		Yes	39 Months
165-4 - In Fish	TGAI or PAIRA	A,B,C	No		Yes	12 Months
165-5 - In Aquatic Non-Target Organisms	TEP	C	No		Yes	12 Months

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Time Frame for Submission
§158.140 Reentry Protection						
132-1 - Foliar Dissipation	TEP	A,B	No		Yes[9]	27 Months
132-2 - Soil Dissipation	TEP	A	No		No	
132-3 - Dermal Exposure	TEP	A,B	No		Conditional[10]	27 Months
132-4 - Inhalation Exposure	TEP	A,B	No		Conditional[11]	27 Months
§158.75 Other Exposure Data						
231 - Dermal Exposure	TEP	H	No		Yes[12]	15 Months
233 - Dermal Exposure	TEP	I	No		Yes[12]	15 Months
234 - Inhalation	TEP	I	No		Yes[13]	15 Months

TABLE A
GENERIC DATA REQUIREMENTS FOR FOLPET

Environmental Fate Continued:

FOOTNOTES:

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA = Pure active ingredient, radiolabelled; TEP = Typical end-use product.

2/ The use-patterns are coded as follows: A = Terrestrial, Food Crop; B = Terrestrial, Nonfood; C = Aquatic, Food Crop; D = Aquatic, Nonfood; E = Greenhouse, Food Crop; F = Greenhouse, Nonfood; G = Forestry; H = Domestic Outdoor; I = Indoor.

3/ Data must be submitted within the indicated timeframes, which begin on the date of the Guidance Document (see front cover for this date).

4/ Study reserved pending the results of an acceptable laboratory volatility study.

5/ No forestry uses were identified under this Standard.

6/ Data requirements for combinations and tank mix uses are currently not being imposed by this Standard.

7/ Data Requirement is reserved pending the results of an acceptable confined dissipation study.

8/ Data requirement is reserved pending the results of an acceptable confined rotational crop study.

9/ For each end-use, the registrant is required to propose an acceptable reentry interval based either upon: (a) dissipation of residues (decline curve), on human exposure to those residues, and on toxicity of the residues; or (b) determination of that time beyond which there are no detectable dislodgeable or inhalable residues remaining in the worker environment. If the registrant has reason to believe that an end-use will not cause human exposure to residues, a request for waive from the data requirement should be submitted.

1C/ Dermal exposure monitoring data may be submitted at the registrant's option.

11/ If dermal exposure monitoring data are submitted, inhalation exposure data are required.

12/ Dermal exposure monitoring must be conducted to determine whether applicators of paints and stains containing folpet are at significant risk. Dermal exposure to applicators of paints containing folpet shall be measured during application of paints by brush and roller to bathrooms. Dermal exposure for applicators of stains containing folpet shall be measured during the application of the stains by brush and air sprayer. Studies must be carried-out according to the EPA Pesticide Assessment Guidelines, Subdivision U, Applicator Exposure Monitoring. Subdivision U is available through the National Technical Information Service (NTIS). Protocols must be approved by the Agency prior to initiating the studies. Protocols must be submitted to EPA for approval within 90 days of your receipt of this Standard.

13/ Inhalation exposure monitoring data are required to determine whether applicators of paint containing folpet and persons entering rooms painted with folpet-treated paint are at significant risk. Inhalation exposure for applicators of paints containing folpet shall be measured during the application of paints by brush and roller to bathrooms. This monitoring should be conducted concurrently with the dermal exposure monitoring requirement. Quantity of folpet in the air of painted rooms shall be monitored until air concentrations attain a steady state or for 30 days after application, which ever is less. Studies must be conducted according to the EPA Pesticide Assessment Guidelinge, Subdivision U, Applicator Exposure Monitoring. Protocols must be submitted to EPA for approval within 90 days of your receipt of this Standard.

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance[1/]	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Timeframe for Submission[2/]
§158.125 Residue Chemistry						
171-4 - Nature of Residue (Metabolism)						
- Plants	PAIRA	Food Uses	No	—	Yes[3/]	18 Months
- Livestock	PAIRA & Plant Metabolites	Food Uses	No	—	Yes[4/]	18 Months
171-4 - Residue Analytical Method						
- Plant Residues	TGAI & Metabolites	Food Uses	Partially	See Footnote A	Yes[5/]	33 Months
- Animal Residues	TGAI & Metabolites	Food Uses	No	—	Yes[5/]	33 Months
171-4 - Storage Stability Data	TEP	Food Uses	No	—	Yes[6/]	33 Months

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[A] Bibliographic Citations: 00054015, 00083393, 00083400,

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance[1/]	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Timeframe for Submission[2/]
§158.125 Residue Chemistry (continued)						
171-4 - Magnitude of the Residue—Residue studies for each food use.						
- Bulb Vegetable Group[a]	TEP	Garlic	No	--	Yes	36 Months
	TEP	Leeks	No	--	Yes	36 Months
	TEP	Shallots	No	--	Yes	36 Months
	TEP	Onions (Dry bulb)[b]	Partially	00090170	Yes	36 Months
	TEP	Onions (Green)	Partially	00090170	Yes	36 Months
- Leafy Vegetables (except Brassica Vegetables) Group[c]	TEP	Celery[d]	Partially	00090170	Yes	36 Months
	TEP	Lettuce[e]	Partially	00090170 00083402	Yes	36 Months

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance[1/]	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Timeframe for Submission[2/]
§158.125 Residue Chemistry (continued)						
- Fruiting Vegetables (except Cucurbits) Group[f]	TEP	Tomatoes[g]	Partially	00090170	Yes	42 Months
- Cucurbit Vegetable Group[h]	TEP	Cucumbers[i]	Partially	00090170	Yes	36 Months
		Melons[j]	Partially	00090170	Yes	36 Months
		Pumpkins[k]	No	--	Yes	36 Months
		Squash (summer)[l]	No	--	Yes	36 Months
		Squash (winter)[m]	No	--	Yes	36 Months
- Citrus Fruits Group[n]	TEP	Grapefruit	Partially	00083390 00090170 00098759	Yes	42 Months
		Oranges	Partially	00053326 00098759 00090170 00083390	Yes	42 Months
		Lemons	Partially	—	Yes	42 Months

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance[1/]	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Timeframe for Submission[2/]
§158.125 Residue Chemistry (continued)						
- Pome Fruits Group[o]	TEP	Apples[p]	Partially	00083401	Yes	42 Months
		Crabapples[q]	No	—	Yes	36 Months
- Stone Fruit Group[r]	TEP	Cherries[s]	Partially	00090170	Yes	36 Months
- Small Fruit and Berries Group[t]	TEP	Blackberries[u]	Partially	00090170	Yes	36 Months
		Blueberries[v]	Partially	00090170	Yes	36 Months
		Boysen-berries[w]	No	—	Yes	36 Months
		Cranberries[x]	Partially	00083392	Yes	36 Months
		Currants[y]	Partially	00090170	Yes	36 Months
		Dewberries[z]	No	—	Yes	36 Months
		Goose-berries[aa]	Partially	00090170	Yes	36 Months
		Grapes[bb]	Partially	00053865 00090170	Yes	42 Months

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

Data Requirement	Test Substance[1/]	Use Pattern	Does EPA Have Data?	Bibliographic Citation	Must Additional Data be Submitted?	Timeframe for Submission[2/]
§158.125 Residue Chemistry (continued)						
		Huckleberries[cc]	No	—	Yes	36 Months
		Loganberries[dd]	No	—	Yes	36 Months
		Raspberries[ee]	Partially	00090170	Yes	36 Months
		Strawberries[ff]	Partially	00090170	Yes	36 Months
- Ungrouped Commodities	TEP	Avocado[gg]	No	—	Yes	36 Months
		Kiwifruit	Partially	00160393	Yes[7/]	36 Months

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

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§158.125 Residue Chemistry (continued)

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA = Pure active ingredient, radiolabeled; TEP = Typical end-use product; EP = End-use product.

2/ Data must be submitted no later than the number of months indicated below from the date of receipt of this Registration Standard.

3/ Depiction of the distribution and metabolism of both ring- and carbonyl-labeled [^{14}C]folpet (i) in mature grapes after the full season foliar applications permitted; (ii) in mature apples after the full season regimen of foliar applications permitted; and (iii) in lettuce after the full season regimen of foliar applications permitted. All applications must be made at rates sufficiently high to permit complete characterization of folpet residues. Metabolism studies utilizing carbonyl-labeled captan may be useful as a substitute for the required carbonyl-labeled experiments with folpet.

4/ Metabolism studies utilizing ruminants and poultry. Animals must be dosed for 3 days with both carbonyl- and ringlabeled [^{14}C]folpet at a level sufficient to make residue identification and quantification possible. Milk and eggs must be collected twice daily during the dosing period. Animals must be killed within 24 hours of the final dose. The distribution and characterization of residues must be determined in milk, eggs, liver, kidney, muscle, and fat. Metabolism studies utilizing carbonyl-labeled captan may be useful as a substitute for the required carbonyl-labeled experiments with folpet.

5/ The submitted GLC and colorimetric methods are adequate for determination of folpet in or on plant commodities with the exception of colorimetric methods which do not specify grinding or homogenization of tissues for extraction of more than surface residues. Field treated samples subjected to residue determination using colorimetric methods RM-1, RM-1A, or RM-1B must be ground or homogenized as part of the extraction procedure.

For enforcement purposes, Method I in the Pesticide Analytical Manual (PAM), Vol. II, Sec. 180.103, which is specific for folpet, is acceptable for plant commodities. This method has undergone a successful method tryout on carrots, cabbage, and soybeans (Pomerantz, 1968). Methods for analysis of milk and animal tissues have been included in the submitted procedure RM-1 (MRID 00054015), however no tolerances exist at present for folpet residues in or on animal tissues or milk.

It should be noted that the nature of the residue in plants and animals has not been adequately described. If additional metabolites of concern are found in plants or animals, the conclusions stated above may change.

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

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§158.125 Residue Chemistry (continued)

6/ All of the residue data requested in this Standard must be accompanied by information on the duration and conditions of sample storage prior to residue analysis and on the stability of folpet under the storage conditions used.

7/ No conclusion can be made because a petition for establishing tolerances for residues in or on this raw agricultural commodity is pending with EPA.

a/ A crop group tolerance is not appropriate at the present time for the following reasons:

- o Additional data are required to support the established tolerances for residues in or on green and dry bulb onions.
- o Data are required to support the established tolerances for residues in or on an additional representative commodity (garlic, leeks, or shallots).

b/ Data depicting folpet residues of concern in or on green and dry bulb onions treated several times foliarly with a WP formulation at 4 lb ai/A. Foliar applications should begin prior to the normal time of disease development and continue at 7-day intervals until the day of harvest. The registrant must propose a maximum permissible number of applications or maximum lb ai/A/season rate. Required tests must reflect the maximum seasonal rate proposed. Tests should be conducted in CA (30%), TX (14%), OR (14%) and MI (6%), or NY (7%), which represent the major 1983 U.S. onion production regions (Agricultural Statistics, 1984, p. 162). These data will be translated to leeks, shallots, and garlic. If aerial application is envisioned, studies using this mode of application will also be needed.

c/ A crop group tolerance is not appropriate at the present time for the following reasons:

- o Additional data are required to support the established tolerances for folpet residues in or on celery and lettuce (head and leaf).
- o Residue data are required for one additional group member (spinach).

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

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§158.125 Residue Chemistry (continued)

d/ The data are insufficient to assess the established tolerance because no data were submitted reflecting residues of folpet in or on celery harvested following multiple applications at the maximum registered rate and analytical procedures (surface extraction or sample maceration) used for residue analysis were unspecified. The following additional data are required:

- o Data reflecting residues of folpet in or on celery harvested 7 days after the last of multiple applications of a WP formulation at 2 lb ai/A. The first application must be made as soon as the plants are established and repeat applications must be made every 7 days throughout the season up to 7 days before harvest. Tests must be conducted in CA (70%), FL (19%), and MI (8%), which collectively produce 97% of domestic celery (Agricultural Statistics, 1984, p. 156). The registrant must propose a maximum number of applications per season or a maximum seasonal use rate. The submitted data must reflect this proposed maximum. If aerial applications are envisioned studies reflecting this mode of treatment will also be needed.

e/ The data are inadequate to assess the established tolerance for residues of folpet in or on lettuce because: (i) no data were submitted reflecting multiple applications at the maximum use rate and harvest at the minimum posttreatment interval; (ii) the analytical procedures used for residue analysis (surface extraction or sample maceration) were unspecified; and (iii) the type of lettuce (head or leaf) was not specified. Therefore, the following must be submitted:

- o Data depicting residues of folpet in or on head and leaf lettuce resulting from multiple applications of a WP formulation at 2 lb ai/A. Samples must be harvested for residue analysis immediately after the final application. Tests must be conducted in CA (71%), and FL (4%), which together produce 75% of domestic lettuce (Agricultural Statistics, 1984, p. 160). The registrant must propose a maximum number of applications per season or a maximum seasonal rate. The submitted data must reflect this proposed maximum. If aerial applications are envisioned, studies reflecting this type of treatment will also be needed.

f/ A crop group tolerance is inappropriate at the present time for the following reasons:

- o Additional data are required to support the existing tolerance for folpet residues in or on tomatoes.

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

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§158.125 Residue Chemistry (continued)

o Residue data are required for one additional group member (peppers); folpet formulations are registered for use only on tomatoes at the present time.

g/ The available data are insufficient to support the established tolerance for residues of folpet in or on tomatoes because: (i) no data were submitted concerning residues in or on tomatoes following multiple foliar applications; (ii) no method recovery data were submitted and analytical procedures (surface extraction or sample maceration) were unspecified; (iii) no data were submitted concerning residue concentration during processing; and (iv) geographic representation was poor. The following additional data are required:

o Data depicting folpet residues of concern in or on tomatoes following multiple foliar applications at 4 lb/ai/A. Foliar applications should begin at first bloom and continue at 7- to 10-day intervals until the day of harvest. Tests should be conducted in CA, where ~85% of tomatoes grown for processing are produced, and FL where ~50% of U.S. fresh market tomatoes are produced (Agricultural Statistics, 1984, p. 173). If aerial applications are envisioned, studies reflecting this type of treatment will also be needed.

o Data depicting residues in wet and dry pomace, puree, catsup and juice processed from tomatoes bearing measurable weathered residues. If residues concentrate in any of these processed commodities, appropriate food/feed additive tolerances must be proposed.

h/ A crop group tolerance is not appropriate at the present time for the following reason:

o Additional data are required to support the established tolerances for folpet residues in or on cucumbers, melons, and summer squash.

i/ The data are inadequate to assess the established tolerance for residues of folpet in or on cucumbers for the following reasons: (i) no data were submitted reflecting residues in or on cucumbers harvested immediately after the last of multiple foliar applications; (ii) no data were submitted reflecting residues resulting from soil treatment with folpet; (iii) it was not specified in the submitted studies whether residues were extracted only from the surface or from macerated portions of cucumbers; and (iv) geographic representation was inadequate. Therefore, the following must be submitted:

o Data reflecting residues of concern in or on cucumbers resulting from multiple foliar applications of a WP formulation at 2 lb ai/100 gal (200 gal/A) and a directed soil application at 4 lb ai/A. Foliar applications must begin when the first true.

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

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§158.125 Residue Chemistry (continued)

j/ The data are inadequate to assess the established tolerance for residues of folpet in or on melons because no data were submitted reflecting multiple applications at the maximum use rate and harvest at the minimum posttreatment interval. Therefore, the following must be submitted:

o Data depicting residues of folpet in or on melons resulting from multiple foliar applications of a WP formulation at 2 lb ai/100 gal (200 gal/A). Samples must be harvested for residue analysis immediately after the final application. Tests must be conducted in CA (52%), and TX (20%), which collectively represent 72% of the U.S. cantaloupe production regions (1982 Census of Agriculture, p. 339). The registrant must propose a maximum number of applications per season or a maximum seasonal rate. The submitted data must reflect this proposed maximum rate. If aerial applications are envisioned, studies reflecting this type of treatment will also be needed.

k/ No data were submitted for pumpkins. Data requested for cantaloupes will be used to assess the established tolerance. Note that translated data may not be used to support a crop group tolerance.

l/ No data were submitted for summer squash. Data requested for cucumbers will be used to assess the established tolerance. Note that translated data may not be used to support a crop group tolerance.

m/ No data were submitted for winter squash. Data requested for cantaloupes will be used to assess the established tolerance. Note that translated data may not be used to support a crop group tolerance.

n/ The submitted data for both oranges and grapefruit are inadequate to evaluate the established tolerance for folpet residues in or on citrus fruit because: (i) no data were submitted depicting residues in or on lemons, which is a representative commodity of the citrus fruit group; (ii) none of the submitted data depicted residues in citrus fruit after a full season regimen of applications as currently permitted under the registered uses; and (iii) it was not specified whether samples were macerated or merely surface extracted for folpet residue analyses; if samples were only surface extracted the residue data are not acceptable. The submitted data for residues in

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

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§158.125 Residue Chemistry (continued)

orange pulp and molasses are sufficient to show that folpet residues do not concentrate in these processed products of citrus fruits; however, data are still needed to determine whether concentration of folpet residues occurs in oil or juice processed from citrus fruit. The following additional data are required:

o Data depicting folpet residues of concern in or on grapefruits (and in separate studies, oranges and lemons) following multiple foliar applications throughout the growing season at 2 lb ai/100 gal of spray suspension sprayed until runoff. The registrant must propose maximum single application rates and maximum seasonal application rates or minimum intervals between applications. Tests with grapefruits should be conducted in FL (65%), TX (18%), and CA (12%), where 95% of U.S. grapefruits are produced (*Agricultural Statistics*, 1984, p. 200). Tests with oranges should be conducted in FL (61%), and CA (35%), which collectively produce 96% of U.S. oranges (*ibid*, p. 200). Tests with lemons should be conducted in CA (80%), and AZ (20%), where virtually all (100%) U.S. lemons are produced (*ibid*, p. 200). If aerial applications are envisioned, studies reflecting this mode of treatment will *also* be needed.

o Data depicting residues in wet and dry citrus pulp, dried peel, juice, oil, and molasses processed from oranges bearing measurable weathered residues. If residues concentrate in any of these processed commodities, appropriate food/feed additive tolerances must be proposed.

o/ A crop group tolerance is not appropriate at the present time for the following reasons:

o Additional data are required to support the tolerance for folpet residue in or on apples.

o A use must be proposed and residue data must be submitted in support of a tolerance for pears, a representative commodity.

p/ The submitted data are not adequate to support the established tolerance for folpet residues in or on apples because: (i) except for one test, it was not specified whether samples were macerated for extraction or only

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

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§158.125 Residue Chemistry (continued)

surface extracted for subsequent residue analysis; and (ii) geographic representation was inadequate. The following data are required:

- o Data depicting folpet residues of concern in or on apples resulting from multiple applications of a WP formulation at 8 lb ai/A/applications of a WP formulation at 8 lb ai/A/application. Samples must be harvested for residue analysis immediately after the final application. Tests must be conducted in WA (35%), NY (12%), MI (10%), and CA (6%), which together produce 63% of domestic apples (Agricultural Statistics, 1984, p. 187). The registrant must propose a maximum number of applications per season, or a maximum seasonal rate. The submitted data must reflect this proposed maximum rate.

- o Residue data from wet pomace, dried pomace, and juice processed from apples bearing measurable weathered residues. Appropriate food/feed additive tolerances must be proposed should concentration of residues occur in processed products.

q/ No data were submitted for crabapples. However, since the registered use on crabapples is identical to that on apples, the requested data for apples will be translated to crabapples. Note that translated data may not be used to support a crop group tolerance.

r/ A crop group tolerance is not appropriate at the present time for the following reasons:

- o Additional data are required to support the established tolerance for residues of folpet in or on cherries.

- o Data are required for peaches and plums or prunes, representative commodities of this group. (Currently, no registered uses exist for these crops.)

s/ The available data are insufficient to evaluate the established tolerance for residues of folpet in or on cherries because: (i) no method recovery or control residue data were submitted and analytical procedures (surface

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

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§158.125 Residue Chemistry (continued)

extraction or sample maceration) were unspecified; and (ii) geographic representation was poor. The following additional data are required:

o Data depicting folpet residues of concern in or on tart cherries following multiple foliar applications at 1 lb ai/100 gal spray suspension sprayed until runoff. Foliar applications should begin at first bloom and continue at 7- to 14-day intervals until the day of harvest. Tests should be conducted in MI (56%), UT (16%), and NY (15%), which collectively accounted for 87% of the 1983 U.S. tart cherry production (Agricultural Statistics, 1984, p. 198). The registrant must propose a maximum number of applications per season or a maximum seasonal use rate. The submitted data must reflect this proposed maximum. If aerial applications are envisioned, studies reflecting this type of treatment will also be needed.

t/ A crop group tolerance is not appropriate at the present time for the following reason:

o Additional data are required to support the established tolerances for residues in or on blackberries, cranberries, grapes, and strawberries.

u/ The available data are insufficient to support the established tolerance for residues of folpet in or on blackberries because: (i) the single submitted test did not depict residues after a maximum seasonal regimen permitted under the registered uses; and (ii) it was not specified whether the analytical method (RM-1) was performed with a maceration or a surface extraction procedure; surface extraction of residues is not acceptable for data collection. The following additional data are required:

o Data depicting folpet residues of concern in or on blackberries on the same day following the last of multiple foliar applications of 2.5 lb ai/A at 7-day intervals from the time berries have set until harvest. Tests must be conducted in OR (75.9%) and CA (12.7%), States which collectively account for 88.6% of U.S. blackberry production (1982 Census of Agriculture, Vol. 1, Part 51, U.S. Department of Commerce, p. 370-371). If aerial applications are envisioned, studies reflecting this mode of treatment will also be needed.

TABLE A

GENERIC DATA REQUIREMENTS FOR FOLPET

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§158.125 Residue Chemistry (continued)

v/ The available data are insufficient to support the established tolerance for residues of folpet in or on blueberries because: (i) data submitted concerning residues in or on blueberries following multiple foliar applications are meager; and (ii) no method recovery data were submitted and analytical procedures (surface extraction or sample maceration) were unspecified. The following additional data are required:

- o Data depicting folpet residues of concern in or on blueberries following multiple foliar applications at 2.5 lb ai/A. Foliar applications should begin prior to the normal time of first infection and be repeated at 7-day intervals until the day of harvest. Tests should be conducted in MI (41%) and NJ (34%), which collectively account for 75% of U.S. blueberry production (1982 Census of Agriculture, Vol. 1, Part 51, U.S. Department of Commerce, p. 371). If aerial applications are envisioned, studies reflecting this type of treatment will also be needed.

w/ No residue data were submitted to support the established tolerance for residues of folpet in or on boysenberries. However, since the registered use on blackberries is identical to that for boysenberries, the requested data for blackberries will be translated to boysenberries.

x/ The available data are inadequate to support the established tolerance because: (i) none of the submitted data depicted folpet residues at the PHI following a treatment regimen reflecting the maximum permitted seasonal use; and (ii) it is not known whether samples were macerated or merely surface extracted for residue analysis. The following additional data are required:

- o Data depicting folpet residues of concern in or on cranberries following multiple foliar applications at 4.5 lb ai/A beginning during bloom and continuing at 10- to 14-day intervals until 30 days prior to harvest. Tests should be conducted in WI (42%) and MA (41%), which collectively provide 83% of the cranberries produced in the U.S. (1982 Census of Agriculture, Vol. 1, Part 51, U.S. Department of Commerce). If aerial applications are envisioned, studies reflecting this mode of treatment will also be needed.

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§158.125 Residue Chemistry (continued)

y/ The available data are insufficient to support the established tolerance for residues of folpet in or on currents because: (i) none of the available data depicted residues of folpet in or on currants following an application regimen reflecting the maximum permitted seasonal usage, and; (ii) no method recovery data were submitted and analytical procedures (surface extraction or sample maceration) were unspecified. If the required residue data for blueberries includes applications of 3 lb ai/A, which is the maximum registered single application rate for currants, then these data will be translated to currants and no data will be required for currants. Otherwise the registrant must provide the following additional data:

- o Data depicting folpet residues of concern in or on currants following multiple foliar applications at 3 lb ai/A. Foliar applications should begin prior to the normal time of first infection and bloom and continue at 7- to 10-day intervals until day of harvest. Tests should be conducted in OR (48%) or WA (35%), which collectively account for 83% of U.S. currant production (1982 Census of Agriculture, Vol. 1, Part 51, U.S. Department of Commerce, p. 372). If aerial applications are envisioned, studies reflecting this type of treatment will also be needed.

z/ No data were submitted to support the established tolerance for residues of folpet in or on dewberries. However, since the registered use on raspberries is identical to that for dewberries, the requested data for raspberries will be translated to dewberries.

aa/ The available data are insufficient to support the established tolerance for residues of folpet in or on gooseberries because: (i) the data are too meager to depict the maximum residues expected from registered treatments; and (ii) no method recovery data were submitted and analytical procedures (surface extraction or sample maceration) were not specified. If the required residue data for blueberries includes applications of 3 lb ai/A, which is the maximum registered single application rate for gooseberries, then these data will be translated to gooseberries and no data will be required for gooseberries. Otherwise, the registrant must provide the following data:

- o Data depicting folpet residues of concern in or on gooseberries following multiple foliar applications at 3 lb ai/A. Foliar applications should begin prior to the normal time of infection and bloom and continue at 7- to 10-day intervals until the day of harvest. Tests should be conducted in OR or WA, which are main areas

§158.125 Residue Chemistry (continued)

of gooseberry production (Modern Fruit Science, 1976, p. 795; percentage figures unavailable). If aerial applications are envisioned, studies reflecting this mode of treatment will also be needed.

bb/ The available data are insufficient to support the established tolerance for folpet residues in or on grapes because: (i) geographic representation was inadequate; and (ii) the registrant did not specify whether samples were macerated prior to analysis (data depicting only surface residues of grapes are not acceptable). Furthermore, no data are available to determine if folpet residues concentrate in raisins, raisin waste, and in wet or dry pomace processed from grapes bearing measurable weathered residues. The following data are required:

o Data depicting folpet residues of concern in or on grapes following multiple foliar applications of a WP formulation at 2.5 lb ai/A and (in a separate test) the 4% D MAI formulation at 3 lb ai/A. Foliar applications should begin just before bloom, repeated just after bloom, and be repeated just after bloom at 7-day intervals for three times until the day of harvest. Tests should be conducted in CA (89%) and NY (4%), which collectively represent 93% of the 1983 U.S. grape-growing regions (Agricultural Statistics, 1983, p. 210). If aerial applications are envisioned, studies reflecting this type of treatment will also be needed.

o Data depicting residues in wet and dry pomace, juice, raisins, and raisin waste processed from grapes bearing measurable, weathered residues. If residues concentrate in any of these processed commodities, appropriate food/feed additive tolerances must be proposed.

cc/ No data were submitted to support the established tolerance for residues of folpet in or on huckleberries. However, since the registered use on blueberries is identical to that for huckleberries, the requested data for blueberries will be translated to huckleberries.

dd/ No data were submitted to support the established tolerance for residues of folpet in or on loganberries. However, since the registered use on blackberries is identical to that for loganberries, the requested data for blueberries will be translated to loganberries.

§158.125 Residue Chemistry (continued)

ee/ The available data are insufficient to support the established tolerance for residues of folpet in or on raspberries because: (i) insufficient data are available to determine the maximum residue level resulting from registered uses; and (ii) no method recovery data were submitted and analytical procedures (surface extraction or sample maceration) were unspecified. However no additional data are required, since upon submission of the data required for blackberries, these data will be translated to raspberries to evaluate the established tolerance.

ff/ The available data are inadequate to support the established tolerance because: (i) none of the submitted data depicted folpet residues following a treatment regimen reflecting the maximum permitted seasonal use; and (ii) it is not known whether samples were macerated or merely surface extracted for residue analysis. The following additional data are required:

o Data depicting folpet residues of concern in or on strawberries following multiple foliar applications at 2 lb ai/A. Foliar applications should begin prior to bloom and be repeated at 7-day intervals until the day of harvest. Tests should be conducted in CA (70%) and FL (12%), where 82% of 1983 U.S. strawberries were produced (Agricultural Statistics, 1984, p. 227). If aerial applications are envisioned, studies reflecting this type of treatment will also be needed.

gg/ No data were submitted to support the established tolerance for residues of folpet in or on avocados. The following data are required:

o Data depicting folpet residues of concern in or on avocados following multiple foliar treatments with a WP formulation at 1.5 lb ai/100 gal spray suspension sprayed until the point of runoff. Foliar applications should commence when bloom buds begin to swell and continue at 2- to 3-week intervals until the day of harvest. Tests should be conducted in CA (86%) and FL (14%), which collectively produce 100% of U.S. avocados (1982, Census of Agriculture, p. 360). If aerial applications are envisioned, studies reflecting this mode of treatment will also be needed.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 88% TECHNICAL[a] (EPA REG. NO. 239-1763; CHEVRON CHEMICAL CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	TGAI	Yes	—d	No
61-2 - Description of Beginning Materials and Manufacturing Process	TGAI	Partially	00104841	Yes (6 months)
61-3 - Discussion of Formation of Impurities	TGAI	Partially	00034754, 00109055	Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	TGAI	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	TGAI	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	TGAI	No		Yes (12 months)
Physical and Chemical Characteristics				
63-2 - Color	TGAI	No		Yes (6 months)
63-3 - Physical State	TGAI	No		Yes (6 months)
63-4 - Odor	TGAI	No		Yes (6 months)
63-5 - Melting Point	TGAI	No		Yes (6 months)
63-6 - Boiling Point	TGAI	N/A[e]		No
63-7 - Density, Bulk Density, or Specific Gravity	TGAI	No		Yes (6 months)

[a] The 88% technical serves as a manufacturing-use product.

[b] Composition: TGAI = technical grade of the active ingredient.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

[e] Not required because the technical is a solid at room temperature.

TABLE B

PROCUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 88% TECHNICAL[a] (EPA REG. NO. 239-1763; CHEVRON CHEMICAL CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry (continued)				
63-8 - Solubility	TGAI or PAI	No		Yes (6 months)
63-9 - Vapor Pressure	PAI	N/A[d]		No
63-10 - Dissociation Constant	PAI	No		Yes (6 months)
63-11 - Octanol/Water Partition Coefficient	PAI	No		Yes (6 months)
63-12 - pH	TGAI	No		Yes (6 months)
63-13 - Stability	TGAI	No		Yes (6 months)
Other Requirement:				
64-1 - Submittal of samples	N/A	N/A		No

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[a] The 88% technical serves as a manufacturing-use product.

[b] Composition: TGAI = technical grade of the active ingredient; PAI = pure active ingredient.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Not required because the melting point of the pure form of the active ingredient is >30 C.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 88% TECHNICAL[a] (EPA REG. NO. 476-2040; STAUFFER CHEMICAL CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	TGAI	Yes	—[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	TGAI	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	TGAI	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	TGAI	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	TGAI	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	TGAI	No		Yes (12 months)
Physical and Chemical Characteristics				
63-2 - Color	TGAI	No		Yes (6 months)
63-3 - Physical State	TGAI	No		Yes (6 months)
63-4 - Odor	TGAI	No		Yes (6 months)
63-5 - Melting Point	TGAI	No		Yes (6 months)
63-6 - Boiling Point	TGAI	N/A[e]		No
63-7 - Density, Bulk Density, or Specific Gravity	TGAI	No		Yes (6 months)

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[a] The 88% technical serves as a manufacturing-use product.

[b] Composition: TGAI = technical grade of the active ingredient.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

[e] Not required because the technical is a solid at room temperature.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 88% TECHNICAL[a] (EPA REG. NO. 476-2040; STAUFFER CHEMICAL CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry (continued)				
63-8 - Solubility	TGAI or PAI	No		Yes (6 months)
63-9 - Vapor Pressure	PAI	N/A[d]		No
63-10 - Dissociation Constant	PAI	No		Yes (6 months)
63-11 - Octanol/Water Partition Coefficient	PAI	No		Yes (6 months)
63-12 - pH	TGAI	No		Yes (6 months)
63-13 - Stability	TGAI	No		Yes (6 months)
Other Requirement:				
64-1 - Submittal of samples	N/A	N/A		No

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[a] The 88% technical serves as a manufacturing-use product.

[b] Composition: TGAI = technical grade of the active ingredient; PAI = pure active ingredient.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Not required because the melting point of the pure form of the active ingredient is >30 C.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 88% TECHNICAL[a] (EPA REG. NO. 32691-2; CALHIO CHEMICALS, INC.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	TGAI	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	TGAI	Partially	Registration jacket	Yes (6 months)
61-3 - Discussion of Formation of Impurities	TGAI	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	TGAI	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	TGAI	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	TGAI	No		Yes (12 months)
Physical and Chemical Characteristics				
63-2 - Color	TGAI	No		Yes (6 months)
63-3 - Physical State	TGAI	No		Yes (6 months)
63-4 - Odor	TGAI	No		Yes (6 months)
63-5 - Melting Point	TGAI	No		Yes (6 months)
63-6 - Boiling Point	TGAI	N/A[e]		No
63-7 - Density, Bulk Density, or Specific Gravity	TGAI	No		Yes (6 months)

[a] The 88% technical serves as a manufacturing-use product.

[b] Composition: TGAI = technical grade of the active ingredient.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

[e] Not required because the technical is a solid at room temperature.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 88% TECHNICAL[a] (EPA REG. NO. 32691-2; CALHIO CHEMICALS, INC.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry (continued)				
63-8 - Solubility	TGAI or PAI	No		Yes (6 months)
63-9 - Vapor Pressure	PAI	N/A[d]		No
63-10 - Dissociation Constant	PAI	No		Yes (6 months)
63-11 - Octanol/Water Partition Coefficient	PAI	No		Yes (6 months)
63-12 - pH	TGAI	No		Yes (6 months)
63-13 - Stability	TGAI	No		Yes (6 months)
Other Requirement:				
64-1 - Submittal of samples	N/A	N/A		No

[a] The 88% technical serves as a manufacturing-use product.

[b] Composition: TGAI = technical grade of the active ingredient; PAI = pure active ingredient.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Not required because the melting point of the pure form of the active ingredient is >30 C.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 90% TECHNICAL[a] (EPA REG. NO. 11678-18; MAKHTESHIM BEER SHEVA CHEMICAL WORKS, LTD.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	TGAI	Yes	—[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	TGAI	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	TGAI	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	TGAI	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	TGAI	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	TGAI	No		Yes (12 months)
Physical and Chemical Characteristics				
63-2 - Color	TGAI	No		Yes (6 months)
63-3 - Physical State	TGAI	No		Yes (6 months)
63-4 - Odor	TGAI	No		Yes (6 months)
63-5 - Melting Point	TGAI	No		Yes (6 months)
63-6 - Boiling Point	TGAI	N/A[e]		No
63-7 - Density, Bulk Density, or Specific Gravity	TGAI	No		Yes (6 months)

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[a] The 90% technical serves as a manufacturing-use product.

[b] Composition: TGAI = technical grade of the active ingredient.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

[e] Not required because the technical is a solid at room temperature.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 90% TECHNICAL[a] (EPA REG. NO. 11678-18; MAKHTESHIM BEER SHEVA CHEMICAL WORKS, LTD.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry (continued)				
63-8 - Solubility	TGAI or PAI	No		Yes (6 months)
63-9 - Vapor Pressure	PAI	N/A[d]		No
63-10 - Dissociation Constant	PAI	No		Yes (6 months)
63-11 - Octanol/Water Partition Coefficient	PAI	No		Yes (6 months)
63-12 - pH	TGAI	No		Yes (6 months)
63-13 - Stability	TGAI	No		Yes (6 months)
Other Requirement:				
64-1 - Submittal of samples	N/A	N/A		No

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[a] The 90% technical serves as a manufacturing-use product.
[b] Composition: TGAI = technical grade of the active ingredient; PAI = pure active ingredient.
[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.
[d] Not required because the melting point of the pure form of the active ingredient is >30 C.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 1.4% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 4816-276; FAIRFIELD AMERICAN CORP.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

[a] The 1.4% formulation intermediate serves as a manufacturing-use product.
[b] Composition: MP = Manufacturing-use product.
[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.
[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 1.4% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 1021-1042; MCLAUGHLIN GORMLEY KING CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

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[a] The 1.4% formulation intermediate serves as a manufacturing-use product.
[b] Composition: MP = Manufacturing-use product.
[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.
[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 1.4% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 4816-265; FAIRFIELD AMERICAN CORP.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	—[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

[a] The 1.4% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 2% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 1021-943; MCLAUGHLIN GORMLEY KING CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

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[a] The 2% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 2% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 1021-761; MCLAUGHLIN GORMLEY KING CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

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[a] The 2% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 2% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 1021-987; MCLAUGHLIN GORMLEY KING CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

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[a] The 2% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 37.5% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 1021-1017; MCLAUGHLIN GORMLEY KING CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

[a] The 37.5% formulation intermediate serves as a manufacturing-use product.
[b] Composition: MP = Manufacturing-use product.
[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.
[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 50% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 11678-29; MAKHTESHIM BEER SHEVA CHEMICAL WORKS, LTD.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

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[a] The 50% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 50% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 239-2489; CHEVRON CHEMICAL CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	—[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	Partially	00104841	Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

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[a] The 50% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-Use PODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 50% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 34688-8; INTERSTAB CHEMICALS, INC.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	NO
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

[a] The 50% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 75% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 239-1352; CHEVRON CHEMICAL CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	Partially	00104841	Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

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[a] The 75% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 80% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 11678-28; MAKHTESHIM BEER SHEVA CHEMICAL WORKS, LTD.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

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[a] The 80% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 88% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 5383-54; TROY CHEMICAL CO.)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Lim'	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

[a] The 88% formulation intermediate serves as a manufacturing-use product.
[b] Composition: MP = Manufacturing-use product.
[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.
[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

DATA REQUIREMENTS FOR FOLPET 88% FORMULATION INTERMEDIATE[a] (EPA REG. NO. 1100-70; TENNECO CHEMICALS)

Data Requirement	Composition[b]	Does EPA Have Data to Satisfy This Requirement?	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)[c]
158.120 Product Chemistry				
Product Identity and Composition:				
61-1 - Product Identity and Disclosure of Ingredients	MP	Yes	--[d]	No
61-2 - Description of Beginning Materials and Manufacturing Process	MP	No		Yes (6 months)
61-3 - Discussion of Formation of Impurities	MP	No		Yes (6 months)
Analysis and Certification of Product Ingredients				
62-1 - Preliminary Analysis of Product Samples	MP	No		Yes (12 months)
62-2 - Certification of Ingredient Limits	MP	Partially	Registration jacket	Yes (12 months)
62-3 - Analytical Methods to Verify Certified Limits	MP	No		Yes (12 months)
Other Requirements:				
64-1 - Submittal of Samples	N/A	N/A		No

[a] The 88% formulation intermediate serves as a manufacturing-use product.

[b] Composition: MP = Manufacturing-use product.

[c] Data must be submitted no later than the time specified from the date of receipt of this Standard.

[d] Information obtained from desk references.

TABLE B

PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING FOLPET

ACUTE TOXICOLOGY DATA FOR EACH MANUFACTURING-USE PRODUCT CONTAINING FOLPET

Data Requirement	Test 1/ Substance	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted? (Time)
§158.135 Toxicology				
ACUTE TESTING				
81-1 - Acute Oral - Rat	MP	Yes	00144057,00137695	No
81-2 - Acute Dermal	MP	Yes	00141728	No
81-3 - Acute Inhalation - Rat	MP	No		Yes (9 months)
81-4 - Primary Eye Irritation	MP	Yes	00160444	No
81-5 - Primary Dermal	MP	Yes	00160430	No
81-6 - Dermal Sensitization	MP	Yes	00160431	No

1/ Composition: MP = Manufacturing-use product.
2/ Data must be submitted no later than the time specified from the date of receipt of this Standard.

APPENDIX II

LABELING APPENDICES

SUMMARY-1

LABEL CONTENTS

40 CFR 162.10 requires that certain specific labeling statements appear at certain locations on the label. This is referred to as format labeling. Specific label items listed below are keyed to the table at the end of this Appendix.

Item 1. PRODUCT NAME - The name, brand or trademark is required to be located on the front panel, preferably centered in the upper part of the panel. The name of a product will not be accepted if it is false or misleading.

Item 2. COMPANY NAME AND ADDRESS - The name and address of the registrant or distributor is required on the label. The name and address should preferably be located at the bottom of the front panel or at the end of the label text.

Item 3. NET CONTENTS - A net contents statement is required on all labels or on the container of the pesticide. The preferred location is the bottom of the front panel immediately above the company name and address, or at the end of the label text. The net contents must be expressed in the largest suitable unit, e.g., "1 pound 10 ounces" rather than "26 ounces." In addition to English units, net contents may be expressed in metric units. [40 CFR 162.10(d)]

Item 4. EPA REGISTRATION NUMBER - The registration number assigned to the pesticide product must appear on the label, preceded by the phrase "EPA Registration No.," or "EPA Reg. No." The registration number must be set in type of a size and style similar to other print on that part of the label on which it appears and must run parallel to it. The registration number and the required identifying phrase must not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency. [40 CFR 162.10(e)]

Item 5. EPA ESTABLISHMENT NUMBER - The EPA establishment number, preceded by the phrase "EPA Est." is the final establishment at which the product was produced, and may appear in any suitable location on the label or immediate container. It must also appear on the wrapper or outside container of the package if the EPA establishment number on the immediate container cannot be clearly read through such wrapper or container. [40 CFR 162.10(f)]

Item 6A. INGREDIENTS STATEMENT - An ingredients statement is required on the front panel. The ingredients statement must contain the name and percentage by weight of each active ingredient and the total percentage by weight of all inert ingredients. The preferred location is immediately below the product name. The ingredients statement must run parallel with, and be clearly distinguished from, other text on the panel. It must not be placed in the body of other text. [40 CFR 162.10(g)]

SUMMARY-2

Item 6B. POUNDS PER GALLON STATEMENT - For liquid agricultural formulations, the pounds per gallon of active ingredient must be indicated on the label.

Item 7. FRONT LABEL PRECAUTIONARY STATEMENTS - Front panel precautionary statements must be grouped together, preferably within a block outline. The table below shows the minimum type size requirements for various size labels.

Size of Label on Front Panel in Square Inches	Signal Word Minimum Type Size All Capitals	"Keep Out of Reach of Children" Minimum Type Size
5 and under	6 point	6 point
above 5 to 10	10 point	6 point
above 10 to 15	12 point	8 point
above 15 to 30	14 point	10 point
over 30	18 point	12 point

Item 7A. CHILD HAZARD WARNING STATEMENT - The statement "Keep Out of Reach of Children" must be located on the front panel above the signal word except where contact with children during distribution or use is unlikely. [40 CFR 162.10(h)(1)(ii)]

Item 7B. SIGNAL WORD - The signal word (DANGER, WARNING, or CAUTION) is required on the front panel immediately below the child hazard warning statement. [40 CFR 162.10 (h)(1)(i)]

Item 7C. SKULL & CROSSBONES AND WORD "POISON" - On products assigned a toxicity Category I on the basis of oral, dermal, or inhalation toxicity, the word "Poison" shall appear on the label in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word POISON. [40 CFR 162.10(h)(1)(i)]

Item 7D. STATEMENT OF PRACTICAL TREATMENT - A statement of practical treatment (first aid or other) shall appear on the label of pesticide products in toxicity Categories I, II, and III. [40 CFR 162.10(h)(1)(iii)]

Item 7E. REFERRAL STATEMENT - The statement "See Side (or Back) Panel for Additional Precautionary Statements" is required on the front panel for all products, unless all required precautionary statements appear on the front panel. [40 CFR 162.10(h)(1)(iii)]

Item 8. SIDE/BACK PANEL PRECAUTIONARY LABELING - The precautionary statements listed below must appear together on the label under the heading "PRECAUTIONARY STATEMENTS." The preferred location is at the top of the side or back panel preceding the directions for use, and it is preferred that these statements be surrounded by a block outline. Each of the three hazard warning statements must be headed by the appropriate hazard title. [40 CFR 162.10(h)(2)].

Item 8A. HAZARD TO HUMANS AND DOMESTIC ANIMALS - Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions to be taken to avoid accident, injury or damage. [40 CFR 162.10(h)(2)(i)]

Item 8B. ENVIRONMENTAL HAZARD - Where a hazard exists to non-target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident, injury, or damage. [40 CFR 162.10(h)(2)(ii)]

Item 8C. PHYSICAL OR CHEMICAL HAZARD - FLAMMABILITY Precautionary statements relating to flammability of a product are required to appear on the label if it meets the criteria in the PHYS/CHEM Labeling Appendix. The requirement is based on the results of the flashpoint determinations and flame extension tests required to be submitted for all products. These statements are to be located in the side/back panel precautionary statements section, preceded by the heading "Physical/Chemical Hazards." Note that no signal word is used in conjunction with the flammability statements.

Item 9A. RESTRICTED USE CLASSIFICATION - FIFRA sec. 3(d) requires that all pesticide formulations/uses be classified for either general or restricted use. Products classified for restricted use may be limited to use by certified applicators or persons under their direct supervision (or may be subject to other restrictions that may be imposed by regulation).

In the Registration Standard, the Agency has (1) indicated certain formulations/uses are to be restricted (Section IV indicates why the product has been classified for restricted use); or (2) reserved any classification decision until appropriate data are submitted.

The Regulatory Position and Rationale states whether products containing this active ingredient are classified for restricted use. If they are restricted the draft label(s) submitted to the Agency as part of your application must reflect this determination (see below).

If you do not believe that your product should be classified for restricted use, you must submit any information and rationale with your application for reregistration. During the Agency's review of your application, your proposed classification determination will be evaluated in accordance with the provisions of 40 CFR 162.11(c). You will be notified of the Agency's classification decision.

Classification Labeling Requirements

If your product has been classified for restricted use, the following label requirements apply:

1. All uses restricted.

a. The statement "Restricted Use Pesticide" must appear at the top of the front panel of the label. The statement must be set in type of the same minimum size as required for human hazard signal word (see table in 40 CFR 162.10(h)(1)(iv)

b. Directly below this statement on the front panel, a summary statement of the terms of restriction must appear (including the reasons for restriction if specified in Section I). If use is restricted to certified applicators, the following statement is required: "For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's Certification."

2. Some but not all uses restricted. If the Regulatory Position and Rationale states that some uses are classified for restricted use, and some are unclassified, several courses of action are available:

a. You may label the product for Restricted use. If you do so, you may include on the label uses that are unrestricted, but you may not distinguish them on the label as being unrestricted.

b. You may delete all restricted uses from your label and submit draft labeling bearing only unrestricted uses.

c. You may "split" your registration, i.e., register two separate products with identical formulations, one bearing only unrestricted uses, and the other bearing restricted uses. To do so, submit two applications for reregistration, each containing all forms and necessary labels. Both applications should be submitted simultaneously. Note that the products will be assigned separate registration numbers.

Item 9B. MISUSE STATEMENT - All products must bear the misuse statement, "It is a violation of Federal law to use this product in a manner inconsistent with its labeling." This statement appears at the beginning of the directions for use, directly beneath the heading of that section.

Item 10A. REENTRY STATEMENT - If a reentry interval has been established by the Agency, it must be included on the label. Additional worker protection statements may be required in accordance with PR Notice 83-2, March 29, 1983.

Item 10B. STORAGE AND DISPOSAL BLOCK - All labels are required to bear storage and disposal statements. These statements are developed for specific containers, sizes, and chemical content. These instructions must be grouped and appear under the heading "Storage and Disposal" in the directions for use. This heading must be set in the same type sizes as required for the child hazard warning. Refer to Appendix II, STOR, PEST/DIS, and CONT/DIS to determine the storage and disposal instructions appropriate for your products.

Item 10C. DIRECTIONS FOR USE - Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment. [40 CFR 162.10]

COLLATERAL LABELING

Bulletins, leaflets, circulars, brochures, data sheets, flyers, or other written or graphic printed matter which is referred to on the label or which is to accompany the product are termed collateral labeling. Such labeling may not bear claims or representations that differ in substance from those accepted in connection with registration of the product. It should be made part of the response to this notice and submitted for review.

SUMMARY-6

LABELING REQUIREMENTS OF THE FIFRA, AS AMENDED

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
1	Product name	All products	Front panel	Center front panel	
2	Company name and address	All products	None	Bottom front panel or end of label text	If registrant is not the producer, must be qualified by "Packed for . . .," "Distributed by. . .," etc.
3	Net contents	All products	None	Bottom front panel or end of label text	May be in metric units in addition to U.S. units
4	EPA Reg. No.	All products	None	Front panel	Must be in similar type size and run parallel to other type.
5	EPA Est. No.	All products	None	Front panel, immediately before or following Reg. No.	May appear on the container instead of the label.
6A	Ingredients statement	All products	Front panel	Immediately following product name	Text must run parallel with other text on the panel.
6B	Pounds/gallon statement	Liquid products where dosage given as lbs. ai/unit area	Front panel	Directly below the main ingredients statement	
7	Front panel precautionary statements	All products	Front panel		All front panel precautionary statements must be grouped together, preferably blocked.
7A	Keep Out of Reach of Children (Child hazard warning)	All products	Front panel	Above signal word	Note type size requirements.
7B	Signal word	All products	Front panel	Immediately below child hazard warning	Note type size requirements.

SUMMARY-7

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
7C	Skull & crossbones and word POISON (in red)	All products which are Category I based on oral, dermal, or inhalation toxicity	Front panel	Both in close proximity to signal word	
7D	Statement of Practical Treatment or First Aid	All products in Categories I, II, and III	Category I: Front panel unless referral statement is used. Others: Grouped with side panel precautionary statements.	Front panel for all.	
7E	Referral statement	All products where precautionary labeling appears on other than front panel.	Front panel		
8	Side/back panel precautionary statements	All products	None	Top or side of back panel preceding directions for use	Must be grouped under the headings in 8A, 8B, and 8C; preferably blocked.
8A	Hazards to humans and domestic animals	All products in Categories I, II, and III	None	Same as above	Must be preceded by appropriate signal word.
8B	Environmental hazards	All products	None	Same as above	Environmental hazards include bee caution where applicable.

SUMMARY-8

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
8C	Physical or chemical hazards	All pressurized products, others with flash points under 150°F	None	Same as above	Refer to Appendix II guide PHYS/CHEM
9A	Restricted block	All restricted products	Top center of front panel	Preferably blocked	Includes a statement of the terms of restriction. The words "RESTRICTED USE PESTICIDE" must be same type size as signal word.
9B	Misuse statement	All products	Immediately following heading of directions for use		Required statement is: "It is a violation of Federal law to use this product in a manner inconsistent with its labeling."
10A	Reentry statement	PR Notice 83-2 or as determined by the Agency	In the directions for use	Immediately after misuse statement	
10B	Storage and disposal block	All products	In the directions for use	Immediately before specific directions for use or at the end of directions for use	Must be set apart and clearly distinguishable from from other directions for use. Refer to Appendix II guides STOR, CONT/DIS, and PEST/DIS for further information and required statements.
10C	Directions for use	All products	None	None	May be in metric as well as U.S. units

§162.10 Labeling requirements.

(a) *General*--(1) *Contents of the label*. Every pesticide product shall bear a label containing the information specified by the Act and the regulations in this Part. The contents of a label must show clearly and prominently the following:

(i) The name, brand, or trademark under which the product is sold as prescribed in paragraph (b) of this section;

(ii) The name and address of the producer, registrant, or person for whom produced as prescribed in paragraph (c) of this section;

(iii) The net contents as prescribed in paragraph (d) of this section;

(iv) The product registration number as prescribed in paragraph (e) of this section;

(v) The producing establishment number as prescribed in paragraph (f) of this section;

(vi) An ingredient statement as prescribed in paragraph (g) of this section;

(vii) Warning or precautionary statements as prescribed in paragraph (h) of this section;

(viii) The directions for use as prescribed in paragraph (i) of this section; and

(ix) The use classification(s) as prescribed in paragraph (j) of this section.

(2) *Prominence and legibility*. (i) All words, statements, graphic representations, designs or other information required on the labeling by the Act or the regulations in this part must be clearly legible to a person with normal vision, and must be placed with such conspicuousness (as compared with other words, statements, designs, or graphic matter on the labeling) and expressed in such terms as to render it likely to be read and understood by the ordinary individual under customary conditions of purchase and use.

(ii) All required label text must:

(A) Be set in 6-point or larger type;

(B) Appear on a clear contrasting background; and

(C) Not be obscured or crowded.

(3) *Language to be used*. All required label or labeling text shall appear in the English language. However, the Agency may require or the applicant may propose additional text in other languages as is considered necessary to protect the public. When additional text in another language is necessary, all labeling requirements will be applied equally to both the English and other-language versions of the labeling.

(4) *Placement of Label*--(i) *General*. The label shall appear on or be securely attached to the immediate container of the

pesticide product. For purposes of this Section, and the misbranding provisions of the Act, "securely attached" shall mean that a label can reasonably be expected to remain affixed during the foreseeable conditions and period of use. If the immediate container is enclosed within a wrapper or outside container through which the label cannot be clearly read, the label must also be securely attached to such outside wrapper or container, if it is a part of the package as customarily distributed or sold.

(ii) *Tank cars and other bulk containers*--(A) *Transportation*. While a pesticide product is in transit, the appropriate provisions of 49 CFR Parts 170-189, concerning the transportation of hazardous materials, and specifically those provisions concerning the labeling, marking and placarding of hazardous materials and the vehicles carrying them, define the basic Federal requirements. In addition, when any registered pesticide product is transported in a tank car, tank truck or other mobile or portable bulk container, a copy of the accepted label must be attached to the shipping papers, and left with the consignee at the time of delivery.

(B) *Storage*. When pesticide products are stored in bulk containers, whether mobile or stationary, which remain in the custody of the user, a copy of the label of labeling, including all appropriate directions for use, shall be securely attached to the container in the immediate vicinity of the discharge control valve.

(5) *False or misleading statements*. Pursuant to section 2(q)(1)(A) of the Act, a pesticide or a device declared subject to the Act pursuant to § 162.15, is misbranded if its labeling is false or misleading in any particular including both pesticidal and non-pesticidal claims. Examples of statements or representations in the labeling which constitute misbranding include:

(i) A false or misleading statement concerning the composition of the product;

(ii) A false or misleading statement concerning the effectiveness of the product as a pesticide or device;

(iii) A false or misleading statement about the value of the product for purposes other than as a pesticide or device;

(iv) A false or misleading comparison with other pesticides or devices;

(v) Any statement directly or indirectly implying that the pesticide or device is recommended or endorsed by any agency of the Federal Government;

(vi) The name of a pesticide which contains two or more principal active ingredients if the name suggests one or more but not all such principal active ingredients even though the names of the other ingredients are stated elsewhere in the labeling;

(vii) A true statement used in such a way as to give a false or misleading impression to the purchaser;

(viii) Label disclaimers which negate or detract from labeling statements required under the Act, and these regulations;

(ix) Claims as to the safety of the pesticide or its ingredients, including statements such as "safe," "nonpoisonous," "noninjurious," "harmless" or "nontoxic to humans and pets" with or without such a qualifying phrase as "when used as directed"; and

(x) Non-numerical and/or comparative statements on the safety of the product, including but not limited to:

(A) "Contains all natural ingredients";

(B) "Among the least toxic chemicals known"

(C) "Pollution approved"

(6) Final printed labeling. (i) Except as provided in paragraph (a)(6)(ii) of this section, final printed labeling must be submitted and accepted prior to registration. However, final printed labeling need not be submitted until draft label texts have been provisionally accepted by the Agency.

(ii) Clearly legible reproductions or photo reductions will be accepted for unusual labels such as those silk-screened directly onto glass or metal containers or large bag or drum labels. Such reproductions must be of microfilm reproduction quality.

(b) Name, brand, or trademark. (1) The name, brand, or trademark under which the pesticide product is sold shall appear on the front panel of the label.

(2) No name, brand, or trademark may appear on the label which:

(i) Is false or misleading, or

(ii) Has not been approved by the Administrator through registration or supplemental registration as an additional name pursuant to § 162.6(b)(4).

(c) Name and address of producer, registrant, or person for whom produced. An unqualified name and address given on the label shall be considered as the name and address of the producer. If the registrant's name appears on the label and the registrant is not the producer, or if the name of the person for whom the pesticide was produced appears on the label, it must be qualified by appropriate wording such as "Packed for ***," "Distributed by ***," or "Sold by ****" to show that the name is not that of the producer.

(d) Net weight or measure of contents. (1) The net weight or measure of content shall be exclusive of wrappers or other materials and shall be the average content unless explicitly stated as a minimum quantity.

(2) If the pesticide is a liquid, the net content statement shall be in terms of liquid measure at 68°F (20°C) and shall be expressed in conventional American units of fluid ounces, pints, quarts, and gallons.

(3) If the pesticide is solid or semisolid, viscous or pressurized, or is a mixture of liquid and solid, the net content statement shall be in terms of weight expressed as avoirdupois pounds and ounces.

(4) In all cases, net content shall be stated in terms of the largest suitable units, i.e., "1 pound 10 ounces" rather than "26 ounces."

(5) In addition to the required units specified, net content may be expressed in metric units.

(6) Variation above minimum content or around an average is permissible only to the extent that it represents deviation unavoidable in good manufacturing practice. Variation below a stated minimum is not permitted. In no case shall the average content of the packages in a shipment fall below the stated average content.

(e) Product registration number. The registration number assigned to the pesticide product at the time of registration shall appear on the label, preceded by the phrase "EPA Registration No.," or the phrase "EPA Reg. No." The registration number shall be set in type of a size and style similar to other print on that part of the label on which it appears and shall run parallel to it. The registration number and the required identifying phrase shall not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency.

(f) Producing establishments registration number. The producing establishment registration number preceded by the phrase "EPA Est.", of the final establishment at which the product was produced may appear in any suitable location on the label or immediate container. It must appear on the wrapper or outside container of the package if the EPA establishment registration number on the immediate container cannot be clearly read through such wrapper or container.

(g) Ingredient statement--(1) General. The label of each pesticide product must bear a statement which contains the name and percentage by weight of each active ingredient, the total percentage by weight of all inert ingredients; and if the pesticide contains arsenic in any form, a statement of the percentages of total and water-soluble arsenic calculated as elemental arsenic. The active ingredients must be designated by the term "active ingredients" and the inert ingredients by the term "inert ingredients," or the singular forms of these terms when appropriate. Both terms shall be in the same type size, be aligned to the same margin and be equally prominent. The statement "Inert Ingredients, none" is not required for pesticides which contain 100 percent active ingredients. Unless the ingredient statement is a complete analysis of the pesticide, the term "analysis" shall not be used as a heading for the ingredient statement.

(2) Position of ingredient statement. (i) The ingredient statement is normally required on the front panel of the label. If there is an outside container or wrapper through which the ingredient statement cannot be clearly read, the ingredient statement must also appear on such outside container or wrapper. If the size or form of the package makes it impracticable to place the ingredient statement on the front panel of the label, permission may be granted for the ingredient statement to appear elsewhere.

(ii) The text of the ingredient statement must run parallel with other text on the panel on which it appears, and must be clearly distinguishable from and must not be placed in the body of other text.

(3) Names to be used in ingredient statement. The name used for each ingredient shall be the accepted common name, if there is one, followed by the chemical name. The common name may be used alone only if it is well known. If no common name has been established, the chemical name alone shall be used. In no case will the use of a trademark or proprietary name be permitted unless such name has been accepted as a common name by the Administrator under the authority of Section 25(c)(6).

(4) Statements of percentages. The percentages of ingredients shall be stated in terms of weight-to-weight. The sum of percentages of the active and the inert ingredients shall be 100. Percentages shall not be expressed by a range of values such as "22-25%." If the uses of the pesticide product are expressed as weight of active ingredient per unit area, a statement of the weight of active ingredient per unit volume of the pesticide formulation shall also appear in the ingredient statement.

(5) Accuracy of stated percentages. The percentages given shall be as precise as possible reflecting good manufacturing practice. If there may be unavoidable variation between manufacturing batches, the value stated for each active ingredient shall be the lowest percentage which may be present.

(6) Deterioration. Pesticides which change in chemical composition significantly must meet the following labeling requirements:

(i) In cases where it is determined that a pesticide formulation changes chemical composition significantly, the product must bear the following statement in a prominent position on the label: "Not for sale or use after [date]."

(ii) The product must meet all label claims up to the expiration time indicated on the label.

(7) Inert ingredients. The Administrator may require the name of any inert ingredient(s) to be listed in the ingredient statement if he determines that such ingredient(s) may pose a hazard to man or the environment.

(h) Warnings and precautionary statements. Required warnings and precautionary statements concerning the general areas of toxicological hazard including hazard to children, environmental hazard, and physical or chemical hazard fall into two groups; those required on the front panel of the labeling and those which may appear elsewhere. Specific requirements concerning content, placement, type size, and prominence are given below.

(1) Required front panel statements. With the exception of the child hazard warning statement, the text required on the front panel of the label is determined by the Toxicity Category of the pesticide. The category is assigned on the basis of the highest hazard shown by any of the indicators in the table below:

Hazard indicators	Toxicity categories			
	I	II	III	IV
Oral LD_{50}	Up to and including 50 mg/kg	From 50 thru 500 mg/kg	From 500 thru 5000 mg/kg	Greater than 5000 mg/kg
Inhalation LC_{50}	Up to and including .2 mg/liter	From .2 thru 2 mg/liter	From 2 thru 20 mg/liter	Greater than 20 mg/liter
Dermal LD_{50}	Up to and including 200 mg/kg	From 200 thru 2000	From 2,000 thru 20,000	Greater than 20,000
Eye effects	Corrosive; corneal opacity not reversible within 7 days	Corneal opacity reversible within 7 days; irritation persisting for 7 days	No corneal opacity; irritation reversible within 7 days	No irritation
Skin effects	Corrosive	Severe irritation at 72 hours	Moderate irritation at 72 hours	Mild or slight irritation at 72 hours

(i) Human hazard signal word.--(A) Toxicity Category I. All pesticide products meeting the criteria of Toxicity Category I shall bear on the front panel the signal word "Danger." In addition if the product was assigned to Toxicity Category I on the basis of its oral, inhalation or dermal toxicity (as distinct from skin and eye local effects) the word "Poison" shall appear in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word "poison."

(B) Toxicity Category II. All pesticide products meeting the criteria of Toxicity Category II shall bear on the front panel the signal word "Warning."

(C) Toxicity Category III. All pesticide products meeting the criteria of Toxicity Category III shall bear on the front panel the signal word "Caution."

(D) Toxicity Category IV. All pesticide products meeting the criteria of Toxicity Category IV shall bear on the front panel the signal word "Caution."

(E) Use of signal words. Use of any signal word(s) associated with a higher Toxicity Category is not permitted except when the Agency determines that such labeling is necessary to prevent unreasonable adverse effects on man or the environment. In no case shall more than one human hazard signal word appear on the front panel of a label.

(ii) Child hazard warning. Every pesticide product label shall bear on the front panel the statement "keep out of reach of children." Only in cases where the likelihood of contact with children during distribution, marketing, storage or use is demonstrated by the applicant to be extremely remote, or if the nature of the pesticide is such that it is approved for use on infants or small children, may the Administrator waive this requirement.

(iii) Statement of practical treatment--(A) Toxicity Category I. A statement of practical treatment (first aid or other) shall appear on the front panel of the label of all pesticides falling into Toxicity Category I on the basis of oral, inhalation or dermal toxicity. The Agency may, however, permit reasonable variations in the placement of the statement of practical treatment is some reference such as "See statement of practical treatment on back panel" appears on the front panel near the word "Poison" and the skull and crossbones.

(B) Other toxicity categories. The statement of practical treatment is not required on the front panel except as described in paragraph (h)(1)(iii)(A) of this section. The applicant may, however, include such a front panel statement at his option. Statements of practical treatment are, however, required elsewhere on the label in accord with paragraph (h)(2) of this section if they do not appear on the front panel.

(iv) Placement and prominence. All the required front panel warning statements shall be grouped together on the label, and shall appear with sufficient prominence relative to other front panel text and graphic material to make them unlikely to be overlooked under customary conditions of purchase and use. The following table shows the minimum type size requirements for the front panel warning statements on various sizes of labels:

Size of label front panel in square inches	Points	
	Required signal word, all capitals	"Keep out of reach of Children"
5 and under	6	6
Above 5 to 10	10	6
Above 10 to 15	12	8
Above 15 to 30	14	10
Over 30	18	12

(2) *Other required warnings and precautionary statements*. The warnings and precautionary statements as required below shall appear together on the label under the general heading "Precautionary Statements" and under appropriate subheadings of "Hazard to Humans and Domestic Animals," "Environmental Hazard" and "Physical or Chemical Hazard."

(i) *Hazard to humans and domestic animals*. (A) Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions to be taken to avoid accident, injury or damage. The precautionary paragraph shall be immediately preceded by the appropriate hazard signal word.

(B) The following table depicts typical precautionary statements. These statements must be modified or expanded to reflect specific hazards.

Toxicity category	Precautionary statements by toxicity category	
	Oral, inhalation, or dermal toxicity	Skin and eye local effects
I . . .	Fatal (poisonous) if swallowed [inhaled or absorbed through skin]. Do not breathe vapor [dust] or spray mist]. Do not get in eyes, on skin, or on clothing [Front panel statement of practical treatment required.].	Corrosive, causes eye and skin damage [or skin irritation]. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield and rubber gloves when handling. Harmful or fatal if swallowed. [Appropriate first aid statement required.]
II . . .	May be fatal if swallowed [inhaled or absorbed through the skin]. Do not breathe vapors [dust or spray mist]. Do not get in eyes, on skin, or on clothing. [Appropriate first aid statements required.].	Causes eye [and skin] irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed. [Appropriate first aid statement required.].
III . . .	Harmful if swallowed [inhaled or absorbed through the skin]. Avoid breathing vapors [dust or spray mist]. Avoid contact with skin [eyes or clothing]. [Appropriate first aid statement required.].	Avoid contact with skin, eyes or clothing. In case of contact immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.
IV . . .	[No precautionary statements required.].	[No precautionary statements required.].

(ii) *Environmental hazards*. Where a hazard exists to non-target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident, injury or damage. Examples of the hazard statements and the circumstances under which they are required follow:

(A) If a pesticide intended for outdoor use contains an active ingredient with a mammalian acute oral LD_{50} of 100 or less, the statement "This Pesticide is Toxic to Wildlife" is required.

(B) If a pesticide intended for outdoor use contains an active ingredient with a fish acute LC_{50} of 1 ppm or less, the statement "This Pesticide is Toxic to Fish" is required.

(C) If a pesticide intended for outdoor use contains an active ingredient with an avian acute oral LD_{50} of 100 mg/kg or less, or a subacute dietary LC_{50} of 500 ppm or less, the statement "This Pesticide is Toxic to Wildlife" is required.

(D) If either accident history or field studies demonstrate that use of the pesticide may result in fatality to birds, fish or mammals, the statement "This pesticide is extremely toxic to wildlife (fish)" is required.

(E) For uses involving foliar application to agricultural crops, forests, or shade trees, or for mosquito abatement treatments, pesticides toxic to pollinating insects must bear appropriate label cautions.

(F) For all outdoor uses other than aquatic applications the label must bear the caution "Keep out of lakes, ponds or streams. Do not contaminate water by cleaning of equipment or disposal of wastes."

(iii) Physical or chemical hazards. Warning statements on the flammability or explosive characteristics of the pesticide are required as follows:

Flash point	Required text
(A) PRESSURIZED CONTAINERS	
Flash point at or below 20°F; if there is a flashback at any valve opening.	Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
Flash point above 20°F and not over 80°F or if the flame extension is more than 18 in. long at a distance of 6 in. from the flame.	Flammable. Contents under pressure. Keep away from heat, sparks, and open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
All other pressurized containers	Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
(B) NONPRESSURIZED CONTAINERS	
At or below 20°F	Extremely flammable. Keep away from fire, sparks, and heated surfaces.
Above 20°F and not over 80°F	Flammable. Keep away from heat and open flame.
Above 80°F and not over 150°F	Do not use or store near heat or open flame.

(i) Directions for Use--(1) General requirements--(i) Adequacy and clarity of directions. Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment.

(ii) Placement of directions for use. Directions may appear on any portion of the label provided that they are conspicuous enough to be easily read by the user of the pesticide product. Directions for use may appear on printed or graphic matter which accompanies the pesticide provided that:

(A) If required by the Agency, such printed or graphic matter is securely attached to each package of the pesticide, or placed within the outside wrapper or bag;

(B) The label bears a reference to the directions for use in accompanying leaflets or circulars, such as "See directions in the enclosed circular." and

(C) The Administrator determines that it is not necessary for such directions to appear on the label.

(iii) Exceptions to requirement for direction for use--(A) Detailed directions for use may be omitted from labeling of pesticides which are intended for use only by manufacturers of products other than pesticide products in their regular manufacturing processes, provided that:

(1) The label clearly shows that the product is intended for use only in manufacturing processes and specifies the type(s) of products involved.

(2) Adequate information such as technical data sheets or bulletins, is available to the trade specifying the type of product involved and its proper use in manufacturing processes;

(3) The product will not come into the hands of the general public except after incorporation into finished products; and

(4) The Administrator determines that such directions are not necessary to prevent unreasonable adverse effects on man or the environment.

(B) Detailed directions for use may be omitted from the labeling of pesticide products for which sale is limited to physicians, veterinarians, or druggists, provided that:

(1) The label clearly states that the product is for use only by physicians or veterinarians;

(2) The Administrator determines that such directions are not necessary to prevent unreasonable adverse effects on man or the environment; and

(3) The product is also a drug and regulated under the provisions of the Federal Food, Drug and Cosmetic Act.

(C) Detailed directions for use may be omitted from the labeling of pesticide products which are intended for use only by formulators in preparing pesticides for sale to the public, provided that:

(1) There is information readily available to the formulators on the composition, toxicity, methods of use, applicable restrictions or limitations, and effectiveness of the product for pesticide purposes;

(2) The label clearly states that the product is intended for use only in manufacturing, formulating, mixing, or repacking for use as a pesticide and specifies the type(s) of pesticide products involved;

(3) The product as finally manufactured, formulated, mixed, or repackaged is registered; and

(4) The Administrator determines that such directions are not necessary to prevent unreasonable adverse effects on man or the environment.

(2) *Contents of Directions for Use*. The directions for use shall include the following, under the headings "Directions for Use":

(i) The statement of use classification as prescribed in 162.10(j) immediately under the heading "Directions for Use."

(ii) Immediately below the statement of use classification, the statement "It is a violation of Federal law to use this product in a manner inconsistent with its labeling."

(iii) The site(s) of application, as for example the crops, animals, areas, or objects to be treated.

(iv) The target pest(s) associated with each site.

(v) The dosage rate associated with each site and pest.

(vi) The method of application, including instructions for dilution, if required, and type(s) of application apparatus or equipment requried.

(vii) The frequency and timing of applications necessary to obtain effective results without causing unreasonable adverse effects on the environment.

(viii) Specific limitations on reentry to areas where the pesticide has been applied, meeting the requirements concerning reentry provided by 40 CFR Part 170.

(ix) Specific directions concerning the storage and disposal of the pesticide and its container, meeting the requirements of 40 CFR Part 165. These instructions shall be grouped and appear under the heading "Storage and Disposal." This heading must be set in type of the same minimum sizes as required for the child hazard warning (See Table in § 162.10(h)(1)(iv).)

(x) Any limitations or restrictions on use required to prevent unreasonable adverse effects, such as:

(A) Required intervals between application and harvest of food or feed crops.

(B) Rotational crop restrictions.

(C) Warnings as required against use on certain crops, animals, objects, or in or adjacent to certain areas.

(D) [Reserved]

(E) For restricted use pesticides, a statement that the pesticide may be applied under the direct supervision of a certified applicator who is not physically present at the site of application but nonetheless available to the person applying the pesticide, unless the Agency has determined that the pesticide may only be applied under the direct supervision of a certified applicator who is physically present.

(F) Other pertinent information which the Administrator determines to be necessary for the protection of man and the environment.

(j) Statement of Use Classification. By October 22, 1976, all pesticide products must bear on their labels a statement of use classification as described in paragraphs (j)(1) and (2) of this section. Any pesticide product for which some uses are classified for general use and others for restricted use shall be separately labeled according to the labeling standards set forth in this subsection, and shall be marketed as separate products with different registration numbers, one bearing directions only for general use(s) and the other bearing directions for restricted use(s) except that, if a product has both restricted use(s) and general use(s), both of these uses may appear on a product labeled for restricted use. Such products shall be subject to the provisions of § 162.10(j)(2).

(1) General Use Classification. Pesticide products bearing directions for use(s) classified general shall be labeled with the exact words "General Classification" immediately below the heading "Directions for Use." And reference to the general classification that suggests or implies that the general utility of the pesticide extends beyond those purposes and uses contained in the Directions for Use will be considered a false or misleading statement under the statutory definitions of misbranding.

(2) Restricted Use Classification. Pesticide products bearing direction for use(s) classified restricted shall bear statements of restricted use classification on the front panel as described below:

(i) Front panel statement of restricted use classification.

(A) At the top of the front panel of the label, set in type of the same minimum sizes as required for human hazard signal words (see table in § 162.10(h)(1)(iv)), and appearing with sufficient prominence relative to other text and graphic material on the front panel to make it unlikely to be overlooked under customary conditions of purchase and use, the statement "Restricted Use Pesticide" shall appear.

(B) Directly below this statement on the front panel, a summary statement of the terms of restriction imposed as a precondition to registration shall appear. If use is restricted to certified applicators, the following statement is required: "For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification." If, however, other regulatory restrictions are imposed, the Administrator will define the appropriate wording for the terms of restriction by regulation.

(k) Advertising. [Reserved]

[40 FR 28268, July 3, 1975; 40 FR 32329, Aug. 1, 1975; 40 FR 38571, Aug. 21, 1975, as amended at 43 FR 578[illegible], Feb. 9, 1978]

PHYS/CHEM-1

PHYSICAL/CHEMICAL HAZARDS

Criteria	Required Label Statement
I. Pressurized Containers	
A. Flashpoint at or below 20°F; or if there is a flashback at any valve opening.	Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
B. Flashpoint above 20°F and not over 80°F; or if the flame extension is more than 18 inches long at a distance of 6 inches from the valve opening.	Flammable. Contents under pressure. Keep away from heat, sparks, and flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
C. All Other Pressurized Containers	Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
II. Non-Pressurized Containers	
A. Flashpoint at or below 20°F.	Extremely flammable. Keep away from fire, sparks, and heated surfaces.
B. Flashpoint above 20°F and not over 80°F.	Flammable. Keep away from heat and open flame.
C. Flashpoint over 80°F and not over 150°F.	Do not use or store near heat and open flame.
D. Flashpoint above 150°F.	None required.

STOR-1

STORAGE INSTRUCTIONS FOR PESTICIDES

Heading:

All products are required to bear specific label instructions about storage and disposal. Storage and disposal instructions must be grouped together in the directions for use portion of the label under the heading STORAGE AND DISPOSAL. Products intended solely for domestic use need not include the heading "STORAGE AND DISPOSAL."

Storage Instructions:

All product labels are required to have appropriate storage instructions. Specific storage instructions are not prescribed. Each registrant must develop his own storage instructions, considering, when applicable, the following factors:

1. Conditions of storage that might alter the composition or usefulness of the pesticide. Examples could be temperature extremes, excessive moisture or humidity, heat, sunlight, friction, or contaminating substances or media.

2. Physical requirements of storage which might adversely affect the container of the product and its ability to continue to function properly. Requirements might include positioning of the container in storage, storage or damage due to stacking, penetration of moisture, and ability to withstand shock or friction.

3. Specifications for handling the pesticide container, including movement of container within the storage area, proper opening and closing procedures (particularly for opened containers), and measures to minimize exposure while opening or closing container.

4. Instructions on what to do if the container is damaged in any way, or if the pesticide is leaking or has been spilled, and precautions to minimize exposure if damage occurs.

5. General precautions concerning locked storage, storage in original container only, and separation of pesticides during storage to prevent cross-contamination of other pesticides, fertilizer, food, and feed.

6. General storage instructions for household products should emphasize storage in original container and placement in locked storage areas.

PESTICIDE DISPOSAL INSTRUCTIONS

The label of all products, except those intended solely for domestic use, must bear explicit instructions about pesticide disposal. The statements listed below contain the exact wording that must appear on the label of these products:

1. The labels of all products, except domestic use, must contain the statement, "Do not contaminate water, food, or feed by storage or disposal."

2. Except those products intended solely for domestic use, the labels of all products that contain active ingredients that are Acute Hazardous Wastes (see list in this Appendix) or are assigned to Toxicity Category I on the basis of oral or dermal toxicity, skin or eye irritation potential, or Toxicity Category I or II on the basis of acute inhalation toxicity must bear the following pesticide disposal statement:

> "Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

3. The labels of all products, except those intended for domestic use, containing active or inert ingredients that are Toxic Hazardous Wastes (see list in this Appendix) or meet any of the criteria in 40 CFR 261, Subpart C for a hazardous waste must bear the following pesticide disposal statement:

> "Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

4. Labels for all other products, except those intended for domestic use, must bear the following pesticide disposal statement:

> "Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility."

5. Products intended for domestic use only must bear the following disposal statement: "Securely wrap original container in several layers of newspaper and discard in trash."

PESTICIDE ACTIVE INGREDIENTS THAT ARE ACUTE HAZARDOUS WASTES

I. PESTICIDES ON THE "E" LIST (with RCRA # and CAS # [40 CFR 261.33(e)]

Acrolein	P003	107-13-1
Aldicarb	P070	116-06-3
Aldrin	P004	309-00-2
Allyl alcohol	P005	107-18-6
Aluminum phosphide	P006	1302-45-0
4-Aminopyridine (Avitrol)	P008	504-24-5
Arsenic acid	P010	7778-39-4
Arsenic pentoxide	P011	1303-28-2
Arsenic trioxide	P012	1327-53-3
Calcium cyanide	P021	592-01-8
Carbon disulfide	P022	75-15-0
p-Chloroaniline	P024	106-47-8
Cyanides (soluble cyanide salts not otherwise specified)	P030	
Cyanogen chloride	P031	506-77-4
Dieldrin	P037	60-57-1
O,O-Diethyl S-[2-ethylthio)ethyl] phosphorodithioate (disulfoton)	P039	298-04-4
O,O-Diethyl O-pyrazinyl phosphorothioate (Zinophos®)	P040	297-97-2
Dimethoate	P044	60-51-5
O,O-Dimethyl O-p-nitrophenyl phosphorothioate (methyl parathion)	P071	298-00-0
4,6-Dinitro-o-cresol and salts	P047	534-52-1
4,6-Dinitro-o-cyclohexylphenol	P034	131-89-5
Dinoseb	P020	88-85-7
Endosulfan	P050	115-29-7
Endothall	P088	129-67-9
Endrin	P051	72-20-8
Famphur	P097	52-85-7
Fluoroacetamide	P057	640-19-7
Heptachlor	P059	76-48-8
Hexachlorohexahydro-exo,exo-dimethanonaphthalene (Isodrin)	P069	465-73-6
Hydrocyanic acid	P063	74-90-8
Methomyl	P066	16752-77-5
alpha-Naphthylthiourea (ANTU)	P072	86-88-41
Nicotine and salts	P075	54-11-5
Octamethylpyrophosphoramide (OMPA, schradan)	P085	152-16-9
Parathion	P089	56-38-2
Phenylmercuric acetate (PMA)	P092	62-38-4
Phorate	P094	298-02-2
Potassium cyanide	P098	151-50-8
Propargyl alcohol	P102	107-19-7
Sodium azide	P105	26628-22-8
Sodium cyanide	P106	143-33-9
Sodium fluoroacetate	P058	62-74-8

Strychnine and salts	P108	57-24-9 60-41-3
O,O,O,O-Tetraethyl dithiopyrophosphate (sulfotepp)	P109	3689-24-5
Tetraethyl pyrophosphate	P111	107-49-3
Thallium sulfate	P115	7446-18-6
Thiofanox	P045	39196-18-4
Toxaphene	P123	8001-35-2
Warfarin (>0.3%)	P001	81-81-2
Zinc phosphide (>10%)	P122	1314-84-7

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II. PESTICIDES DERIVED FROM TRI-, TETRA-, AND PENTACHLOROPHENOLS [40 CFR 261.31]

2-Chloroethyl 2-(2,4,6-trichlorophenoxy) ethyl ether	F027	5324-22-1
Dehydroabietylammonium pentachlorophenoxide	F027	35109-57-0
Erbon	F027	136-25-4
O-ethyl O-(2,4,5-trichlorophenyl) ethylphosphonothioate	F027	327-98-0
2,2'-Methylenebis (3,4,6-trichlorophenol) (Hexachlorophene)	F027	70-30-4
--Potassium salt of	F027	67923-62-0
--Sodium salt of	F027	3247-34-5
--Disodium salt of	F027	5736-15-2
Pentachlorophenol	F027	87-86-5
--Potassium salt of	F027	7778-73-6
--Sodium salt of	F027	131-52-2
--Zinc salt of	F027	2917-32-0
--Zinc salt of N-alkyl (C_{16}-C_{18})-1,3-propanediamine	F027	
--Pentachlorophenyl laurate	F027	3772-94-9
Potassium trichlorophenate (2,4,6)	F027	2591-21-1
Potassium trichlorophenate (2,4,5)	F027	35471-43-3
Silvex	F027	93-72-1
--2-Butoxyethyl ester	F027	19398-13-1
--Butoxypolypropoxypropyl ester	F027	53404-07-2
--Butoxypropyl ester	F027	25537-26-2
--Diethanolamine salt	F027	51170-59-3
--Diisopropanolamine salt	F027	53404-09-4
--Dimethylamine salt	F027	55617-85-1
--Dipropylene glycol isobutyl ether ester	F027	53535-26-5
--Ethanolamine salt	F027	7374-47-2
--2-Ethylhexyl ester	F027	53404-76-5
--Isooctyl ester	F027	53404-14-1

--Isopropyl ester	F027	93-78-7
--Propylene glycol isobutyl ether ester	F027	53466-86-7
--Tripropylene glycol isobutyl ether ester	F027	53535-32-3
4-(2,4,5-Trichlorophenoxy)butyric acid [2,4,5-TB]	F027	93-80-1
2-(2,4,5-Trichlorophenoxy)ethyl hydrogen sulfate [2,4,5-TES]	F027	69633-04-1
1,4',5'-Trichloro-2'-(2,4,5-trichlorophenoxy) methanesulfonanilide [Edolan U]	F027	69462-14-2

PESTICIDES THAT ARE TOXIC HAZARDOUS WASTES

PESTICIDES ON THE "F" LIST [40 CFR 261.33(f)] (with	RCRA #, and	CAS #
Acetone	U002	67-64-1
Acrylonitrile*	U009	107-13-1
Amitrole	U011	61-82-5
Benzene*	U019	71-43-2
Bis(2-ethylhexyl)phthalate	U028	117-81-7
Cacodylic acid	U136	75-60-5
Carbon tetrachloride*	U211	56-23-5
Chloral (hydrate) (chloroacetaldehyde)	U034	302-17-0
Chlordane, technical*	U036	57-74-9
Chlorobenzene*	U037	108-90-7
4-Chloro-m-cresol	U039	59-50-7
Chloroform*	U044	67-66-3
o-Chlorophenol	U048	95-57-8
Creosote	U051	8021-39-4
Cresylic acid (cresols)*	U052	1319-77-3
Cyclohexane	U056	110-82-7
Cyclohexanone	U057	108-94-1
Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one (Kepone, chlordecone)	U142	143-50-0
1,2-Dibromo-3-chloropropane (DBCP)	U066	96-12-8
Dibutyl phthalate	U069	84-74-2
S-2,3-(Dichloroallyl diisopropyl-thiocarbamate) (diallate,Avadex)	U062	2303-16-4
o-Dichlorobenzene*	U070	95-50-1
p-Dichlorobenzene*	U072	106-46-7
Dichlorodifluoromethane (Freon 12®)	U075	75-71-8
3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide (pronamide, Kerb®)	U192	23950-58-5
Dichloro diphenyl dichloroethane (DDD)	U060	72-54-8
Dichloro diphenyl trichloroethane (DDT)	U061	50-29-3
Dichloroethyl ether	U025	1191-17-9
2,4-Dichlorophenoxyacetic, salts and esters (2,4-D)*	U240	94-75-7
1,2-Dichloropropane	U083	8003-19-8
1,3-Dichloropropene (Telone)	U084	542-75-6
Dimethyl phthalate	U102	131-11-3
Epichlorohydrin (1-chloro-2,3-epoxypropane)	U041	106-89-8
Ethyl acetate	U112	141-78-6
Ethyl 4,4'-dichlorobenzilate (chlorobenzilate)	U038	510-15-6

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*Proposed for deletion by TCLP proposal

Ethylene dibromide (EDB)	U067	106-93-4
Ethylene dichloride*	U077	107-06-2
Ethylene oxide	U115	75-21-8
Formaldehyde	U122	50-00-0
Furfural	U125	98-01-1
Hexachlorobenzene*	U127	118-74-1
Hexachlorocyclopentadiene	U130	77-47-4
Hexachloroethane*	U131	67-72-1
Hydrofluoric acid	U134	7664-39-3
Isobutyl alcohol*	U140	78-83-1
Lead acetate	U144	301-04-2
Lindane*	U129	58-89-9
Maleic hydrazide	U148	123-33-1
Mercury	U151	7439-97-6
Methoxychlor*	U247	72-43-5
Methyl alcohol (methanol)	U154	67-56-1
Methyl bromide	U029	74-83-9
Methyl chloride	U045	74-87-3
2,2'-Methylenebis (3,4,6-trichlorophenol) (hexachlorophene) [acute waste per 261.31]	U132	70-30-4
Methylene chloride*	U080	75-09-2
Methyl ethyl ketone*	U159	78-93-3
4-Methyl-2-pentanone (methyl isobutyl ketone)	U161	108-10-1
Naphthalene	U165	91-20-3
Nitrobenzene*	U169	98-95-3
p-Nitrophenol	U170	100-02-7
Pentachloroethane	U184	76-01-7
Pentachloronitrobenzene (PCNB)	U185	82-68-8
Pentachlorophenol* [acute waste per 261.31]	U242	87-86-5
Phenol*	U188	108-95-2
Pyridine*	U196	110-86-1
Resorcinol	U201	108-46-3
Safrole	U203	94-59-7
Selenium disulfide	U205	7488-56-4
Silvex [acute waste per 261.31]	U233	93-72-1
1,1,2,2-Tetrachloroethane*	U209	79-34-5
Tetrachloroethylene*	U210	127-18-4
2,3,4,6-Tetrachlorophenol* [acute waste per 261.31]	U212	
Thiram	U244	137-26-8
Toluene*	U220	108-88-3
1,1,1-Trichloroethane* (methyl chloroform)	U226	71-55-6
Trichloroethylene*	U228	79-01-6
Trichloromonofluoromethane (Freon 11®)	U121	75-69-4
2,4,5-Trichlorophenol* [acute waste per 261.31]	U230	95-95-4
2,4,6-Trichlorophenol* [acute waste per 261.31]	U231	88-06-2

2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)* [acute waste per 261.31]	U232	93-76-5
Warfarin (<0.3%)	U248	81-81-2
Xylene	U239	1330-20-7
Zinc phosphide (<10%)	U249	1314-84-7

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CONTAINER DISPOSAL INSTRUCTIONS

The label of each product must bear container disposal instructions appropriate to the type of container.

1. Domestic use products must bear one of the following container disposal statements:

Container Type	Statement
Non-aerosol products (bottles, cans, jars)	Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in trash.
Non-aerosol products (bags)	Do not reuse bag. Discard bag in trash.
Aerosol products	Replace cap and discard containers in trash. Do not incinerate or puncture.

2. All other products must bear container disposal instructions, based on container type, listed below:

Container Type	Statement
Metal containers (non-aerosol)	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plactic containers	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
Glass containers	Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.
Fiber drums with liners	Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused[1], dispose of in the same manner.
Paper and plastic bags	Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Compressed gas cylinders	Return empty cylinder for reuse (or similar wording)

[1] Manufacturer may replace this phrase with one indicating whether and how fiber drum may be reused.

APPENDIX III

USE INDEX APPENDICES

FOLPET

Auxiliary Documentation

Reg. No. 334-256 has been sent to PCB for cancellation.

Reg. No. 19753-2 has been voluntarily cancelled and sent to PCB.

Reg. No. 3090-90 has captan as the active ingredient, not folpet. It is currently on the folpet GFD.

Reg. No. 239-1029 (75% WP) has insecticide tank mixes (ORTHENE or ISOTOX) and a foliar feeding mix.

Reg. No. 4-186 has house plant uses that were determined to be for sites validated for the other active ingredients.

Reg. No. 5383-54 has a 'laquers' claim, but specific directions for paint only.

Reg. No. 1100-78 has a 'caulking' claim, but specific directions for paint only.

Reg. No. 43-70 (creosote paint) does not give specific sites.

The directions for strawberry to apply "until after harvest" is on most labels, but not in the compendium.

Flowering Crabapple/Scab (on 8590-343) is not in the compendium but has been entered on the strength of the Ag Crops claim.

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FOLPET*

TYPE PESTICIDE: Fungicide

FORMULATIONS:

Tech (88%, 90%)
FI (1.4%, 2%, 37.5%, 50%, 75%, 80%, 88%)
D (4%, 5%, 7.5%, 35%, 88%)
WP (14.5%, 25%, 42%, 50%, 60%, 75%)
WP/D (5%, 6.5%, 7.5%, 8.82%)
Impr (0.0616%, 0.1056%, 0.2288%)
FlC (1.17 lb/gal or 13%, 4.29 lb/gal or 44%)
RTU (0.27%, 0.3%, 0.4%, 0.44%, 0.45%, 0.47%, 0.48%, 0.49%, 0.5%, 0.5275%, 0.53%, 0.66%, 0.7%, 0.8%, 1%)
PrL (0.5%, 0.7%, 0.75%)
PrD (4%)

GENERAL WARNINGS AND LIMITATIONS: Folpet is compatible with most commonly used insecticides, adjuvants, and fungicides. Folpet is not compatible with strongly alkaline materials such as hydrated lime (fungicidal activity is reduced). Do not use in combination with or closely following oil sprays. Do not combine wettable powders with emulsifiable concentrates in the same spray tank unless previous use of the materials being combined has proven them to be physically compatible. Observe all warnings and limitations for other active ingredients on multiple active ingredient labels.

Mixers, loaders, and applicators, when mixing, loading, and applying, must wear mid-forearm to elbow-length natural or synthetic rubber, vinyl, or plastic gloves impermeable to folpet, boots or overshoes, one-piece overalls which have long sleeves and long pants, face shield or goggles, and a hat or other appropriate head covering. Applicator's protection may also be obtained by use of an enclosed tractor cab with a properly filtered air supply. Fieldworkers and harvesters must wear natural or synthetic rubber, vinyl, or plastic gloves impermeable to folpet residues. Leather or fabric gloves are not acceptable. If the folpet formulation is a liquid, a chemical-resistant apron must be worn when mixing and loading the chemical. If the formulation is a dust, granular, or wettable powder, a dust mask must be worn when mixing and loading the chemical. Clothing worn while loading, mixing, and applying this product must be laundered separately from other clothing before reuse. Clothing that may have been drenched or heavily contaminated must be disposed of in accordance with State and local regulations.

Homeowners must wear natural or synthetic rubber, vinyl, or plastic gloves impermeable to folpet when using indoors or outdoors. They must also wear long pants and long-sleeved shirt and apply, if a spray, with the wind to their back. Nondisposable gloves must be washed thoroughly with soap and water before removing. Clothing worn while handling folpet must be laundered separately from other clothing before reusing.

Folpet is toxic to fish. Cranberries excluded, do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal

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*N-((trichloromethyl)thio)phthalimide

GENERAL WARNINGS AND LIMITATIONS (continued)

of wastes. Refer to labeling for appropriate Endangered Species Limitations.
Dosage rates are given in active ingredient.
Definition of Terms:
*Tablespoons actual: A hypothetical quantity computed by multiplying the number (or equivalent number) of tablespoons of product by the concentration of folpet in the formulation.
MAI - multiple active ingredient(s)

Site and Pest | Dosages and Formulation(s) | Tolerance, Use, Limitations

TERRESTRIAL FOOD CROP

General Warnings and Limitations: Do not rotate a foliar treated crop with crops other than those with registered folpet uses, excluding seed piece and plant propagule treatments. Do not allow persons to enter treated areas within 4 days following application unless protective clothing specified for applicators is worn. Reentry information must be posted conspicuously at the site of application.

(Agricultural Crops)

/04001AA	Apple		25 ppm No preharvest interval through 8.0 pounds per acre. In eastern states, russeting may occur on sensitive varieties such as Golden Delicious, Red Delicious, and Stayman Winesap when applied just before bloom to 30 days after petal fall. In western states, do not apply between bloom and July 1 to avoid injury.
/04002AA	Crabapple		
FEAJVAG	Apple scab (Venturia)	0.75-1.0 lb/100 gal [up to 800 gal/A] (50%, 75% WP) or 1 tbls actual*/gal (75% WP) or	Delayed dormant and foliar application. Apply at delayed dormant. Repeat at 14 day intervals through cover sprays. OR MAI Formulated with dicofol, carbaryl, and malathion.
FIADGAP	Bitter rot (Glomerella)		
FIBFPCH FMAVPCH	Black rot of fruit and frogeye leaf spot (Physalospora)		
FMAIMCO	Brook's fruit spot (Mycosphaerella)		
FMAUSAH	Flyspeck (Schizothyrium)		

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Apple cluster (continued)		
	Pest list continued from previous page.		
FMBCAAX	Leaf spot (Alternaria)	—OR MAI— 0.145 lb/20 gal or 0.435 tbls actual*/gal (14.5% WP)	
FCAFGAL	Sooty blotch (Gloeodes)		
FICRBAT	White rot (Botryosphaeria)		
/28000AA	Avocado		25 ppm No preharvest interval through 18.0 pounds per acre.
FEAJSCB	Scab (spot anthracnose) (Sphaceloma)	1.5 lb/100 gal [up to 1,000 gal/A] (50%, 75% WP)	Foliar application. Apply when the bloom buds begin to swell in very susceptible varieties, or during late bloom when some fruit has set in the slight and moderately susceptible varieties. Repeat at 2 to 3 week intervals as needed.
/01002AA	Blackberry		25 ppm No preharvest interval through 2.5 pounds per acre.
/01003AA	Boysenberry		
/01004AA	Dewberry		
/01005AA	Loganberry		
/01006AA	Raspberry		
FIBFQBB	Fruit rot	1.0 lb/100 gal [250 gal/A] (25%, 50%, 75% WP) or 0.625-1 tbls actual*/gal (25%, 75% WP) —OR MAI— 0.145 lb/20 gal or 0.435 tbls actual*/gal (14.5% WP)	Foliar application. Apply when berries have set. Repeat at 7 day intervals until harvest. OR MAI Formulated with dicofol, carbaryl, and malathion.
FHACBAW	Gray mold (Botrytis)		
FBBDDBC	Spur blight (Didymella)		

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/01009AA /01015AA	Blueberry Huckleberry		25 ppm No preharvest interval through 2.5 pounds per acre.
FHACBAW	Gray mold (Botrytis)	1.0 lb/100 gal [250 gal/A] (25%, 50%, 75% WP) or 0.625-1 tbls actual*/gal (25%, 75% WP)	Foliar application. Apply before first infection. Repeat at 7 day intervals until harvest.
FMBCGAN	Leaf spot (anthracnose) (Gloeosporium)		
FFACMBT	Powdery mildew (Microsphaera)		
	Boysenberry		See Blackberry cluster.
/28003AA	Celery		50 ppm 7 day preharvest interval through 2.0 pounds per acre.
FBAMCBM	Early blight (Cercospora)	1.0-2.0 lb/A (50%, 75% WP) or 1 tbls actual*/gal (75% WP)	Foliar application. Apply after plants are established in the field. Repeat at 7 day intervals.
FBASSBL	Late blight (Septoria)		
/05002AA	Cherry (sour)		50 ppm No preharvest interval through 6.0 pounds per acre. Do not use on sweet cherries as foliage injury may occur.
FBADMCB	Brown rot blossom and twig blight (Monilinia)	0.5-1.0 lb/100 gal (50%, 75% WP) or 1 tbls actual*/gal (75% WP)	Delayed dormant, foliar, and postharvest application. For brown rot, apply in delayed dormant, popcorn, and bloom stages and at 7 to 14 day intervals. Repeat as needed. For leaf spot, apply in cover period at 7 to 14 day intervals as needed. Repeat once or twice as a postharvest foliar application.
FIALMCB	Brown rot of fruit (Monilinia)		
FMBCCDJ	Cherry leaf spot (Coccomyces)		
		—OR MAI--	OR MAI
		0.145 lb/20 gal or 0.435 tbls actual*/gal (14.5% WP)	Formulated with dicofol, carbaryl, and malathion.

EPA Compendium of Acceptable Uses

FOLPET

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/02000AA	Citrus Fruits (grapefruit, kumquat, lemon, lime, orange, tangelo, tangerine)		15 ppm No preharvest interval through 20.0 pounds per acre.
FMAYMCO	Greasy spot (Mycosphaerella)	1.0-2.0 lb/ 100 gal (50%, 75% WP) or 0.6-1.125 tbls actual*/gal (75% WP)	Foliar application. For greasy spot, apply 1.0 pound per 100 gallons with a suitable sticker. Apply in August and September, 3 to 10 weeks after first growth. For melanose, apply 1.0 to 2.0 pounds per 100 gallons. Apply 1 week after bloom and complete as soon as possible. For scab, apply 1.0 pound per 100 gallons. Apply in dormant and two-thirds petal fall stages, 2 weeks later, and on fall flush in August and September.
FIBLDAP	Melanose (Diaporthe)		
FAABEAH	Scab (spot anthracnose) (Elsinoe)		
	Crabapple		See Apple cluster.
/01010AA	Cranberry		25 ppm 30 day preharvest interval through 9.0 pounds per acre. Water from cranberry bogs (in which cranberry plants has been treated with folpet) must not be used for irrigation of crops other than those with registered folpet uses.
FICJQBB	Storage rots	4.5 lb/A (50%, 75% WP)	Foliar application. Apply during bloom. Repeat at 10 to 14 day intervals.
/10010AA	Cucumber		15 ppm No preharvest interval through 4.0 pounds per acre.
FAAACDP	Anthracnose (Colletotrichum)	1.0-2.0 lb/ 100 gal [200 gal/A] (25%, 50%, 75% WP) or 1.875-2.5 tbls actual*/gal [fruit rots] (25% WP) or	Foliar application. For fruit rots, apply 3.0 to 4.0 pounds per acre as a directed spray at the soil in the row. Apply when plants begin to run. For the other diseases, apply 1.0 to 2.0 pounds per acre with a suitable sticker. Apply at first true leaf stage. Repeat at 5 to 10 day intervals depending upon disease pressure until harvest. OR MAI Formulated with dinocap; or dicofol, carbaryl, and malathion.
FFABPEA	Downy mildew (Pseudoperonospora)		
FIBFPES	Fruit rot (Pythium)		
FIBFRAM	Fruit rot (Rhizoctonia)		
FFACEBJ	Powdery mildew (Erysiphe)		

FOLPET

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Cucumber (continued)	0.625-1.25 tbls actual*/gal (25% WP) or 1.125 tbls actual*/gal [2 qt/100 ft of row] (75% WP) --OR MAI-- 0.145 lb/20 gal or 0.435 tbls actual*/gal (14.5% WP) or 0.105 lb/8-16 gal [200 gal/A] or 0.42-0.84 tbls actual*/gal (42% WP)	
/01011AA /01013AA	Currant Gooseberry		25 ppm No preharvest interval through 3.0 pounds per acre.
FMBCQBB	Leaf spots	2.0 lb/100 gal [150 gal/A] (50%, 75% WP) or 1.25 tbls actual*/gal (25% WP) or 2 tbls actual*/gal (75% WP)	Foliar application. Apply before infection or before bloom. Repeat at 7 to 10 day intervals in the post-bloom period.
	Dewberry		See Blackberry cluster.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/14007AA /14010AA /14011AA /14017AA	Garlic Leek Onion Shallot, Onions		15 ppm (garlic, onions (dry bulb)) 50 ppm (leek, onions (green), shallots) No preharvest interval through 4.0 pounds per acre.
FFABPAU	Downy mildew (Peronospora)	2.0 lb/100 gal [200 gal/A] (50%, 75% WP) or 1.125 tbls actual*/gal [1 qt/100 ft of row] (75% WP) or 1.25-2 tbls actual*/gal (25%, 75% WP)	Foliar application. Apply before infection. Repeat at 7 day intervals until tops begin to dry before harvest.
FCAEAAX	Purple blotch (Alternaria)		
	Gooseberry		See Currant cluster.
/01014AA	Grapes		25 ppm No preharvest interval through 3.0 pounds per acre. During periods of extended hot, dry weather, foliage injury may occur.
FIBFGBC	Black rot (Guignardia)	1.0 lb/100 gal (25%, 50% WP) or 0.625-1 tbls actual*/gal (25%, 75% WP) —OR MAI— 3.0 lb/A or 0.07 lb/1,000 sq.ft (4% D) or	Delayed dormant and foliar application. For black rot and downy mildew, apply 250 to 300 gallons per acre. Apply just before bloom. Repeat just after bloom and at 7 to 10 day intervals for 1 to 3 more applications. For dead-arm in eastern states, apply when new growth is 1 to 2 inches long. Repeat when 4 to 10 inches long. In western states, apply at bud break. Repeat 2 weeks later or when new growth is 4 to 8 inches long. For powdery mildew, apply 2 to 3 weeks after bloom. Repeat at 2 week intervals. OR MAI Formulated with dinocap; or carbaryl.
FFABPCV	Downy mildew (Plasmopara)		
FDAMQBB	Dead-arm		
FFACUAB	Powdery mildew (Uncinula)		

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Grapes (continued)		
		0.16 lb/16 gal [up to 300 gal/A] or 0.63 tbls actual*/gal (42% WP)	
	Huckleberry		See Blueberry cluster.
	Leek		See Garlic cluster.
/13020AA	Lettuce		50 ppm No preharvest interval through 2.0 pounds per acre.
FFABBBA	Downy mildew (Bremia)	1.0 lb/100 gal [up to 200 gal/A] (50%, 75% WP) or 0.625-1 tbls actual*/gal (25%, 75% WP)	Foliar application. Apply when plants are established in field. Repeat at 7 day intervals until harvest.
	Loganberry		See Blackberry cluster.
/10001AA	Melons (cantaloupe, honeydew melons, muskmelons, watermelons)		15 ppm No preharvest interval through 4.0 pounds per acre.
/10011AA	Pumpkin		
/10013AA	Squash, Summer		
/10014AA	Squash, Winter		
FAAACDP	Anthracnose (Colletotrichum)	1.0-2.0 lb/100 gal [up to 200 gal/A depending on vine size] (50%, 75% WP) or 0.625-2 tbls actual*/gal (25%, 75% WP)	Foliar application. Apply when first true leaves appear. Repeat weekly until harvest.
FFABPEA	Downy mildew (Pseudoperonospora)		
FFACEBJ	Powdery mildew (Erysiphe)		

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Melons (cantaloupe, honeydew melons, muskmelons, watermelons) (continued)		
		MAI: melons - 0.145 lb/20 gal or 0.435 tbls actual*/gal (14.5% WP)	Foliar application. Formulated with dicofol, carbaryl, and malathion.
		MAI: summer squash - 0.105 lb/8-16 gal [200 gal/A] or 0.42-0.84 tbls actual*/gal (42% WP)	Foliar application. Formulated with dinocap.
	Onion		See Garlic cluster.
	Pumpkin		See Melons cluster.
	Raspberry		See Blackberry cluster.
	Shallot, Onions		See Garlic cluster.
	Squash, Summer		See Melons cluster.
	Squash, Winter		See Melons cluster.
/01016AA	**Strawberry**		25 ppm No preharvest interval through 2.0 pounds per acre.
FIBFQBB FMBCMCO	Fruit rot Leaf spot (Mycosphaerella)	1.0 lb/100 gal [up to 200 gal/A] (50%, 75% WP) or 1 tbls actual*/gal (75% WP)	Delayed dormant, foliar, and postharvest application. Apply before bloom. Repeat at 7 day intervals until after harvest.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/11005AA	Tomato		25 ppm No preharvest interval through 4.0 pounds per acre.
FAAAGAP	Anthracnose (Glomerella)	2.0 lb/100 gal [up to 200 gal/A] (50%, 75% WP) or 1.125 tbls actual*/gal [2 qt/100 ft of row] (75% WP) or 1-2 tbls actual*/gal (25%, 75% WP)	Foliar application. Apply during bloom. Repeat at 7 to 10 day intervals through harvest.

TERRESTRIAL NON-FOOD CROP

(Ornamental Plants and Forest Trees)

General Warnings and Limitations: Apply as specified except more frequently during periods of rapid new growth and severe infection under conditions of recurring rains or high humidity. Dust, pressurized liquid, and pressurized dust formulations for which a dose rate is not specified should be applied lightly, covering both upper and lower leaf surfaces. All wettable powder/dust formulations may be applied at the dilution given or as a dust in the manner previously described.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/31026AA /31156AA	Aster Phlox		
FFACEBJ	Powdery mildew (Erysiphe)	1.0 lb/100 gal or 0.625-1.125 tbls actual*/gal (25%, 50%, 75% WP) or 0.15 oz/gal (1.17 lb/gal or 13% FlC) or	Foliar application. Apply before disease appears. Repeat at 7 to 10 day intervals. OR MAI Formulated with dinocap; dicofol and carbaryl; dicofol and malathion; methoxychlor and malathion; methoxychlor and oxydemeton-methyl; carbaryl and malathion; diazinon and sulfur; dicofol, carbaryl, and malathion; diazinon, piperonyl butoxide, and pyrethrins; or carbaryl, petroleum distillate, piperonyl butoxide, pyrethrins, and rotenone.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Aster cluster (continued)		
		—OR MAI— 0.05-0.098 lb/10 gal or 0.3-0.75 tbls actual*/gal (14.5%, 42% WP) (5%, 7.5% WP/D) or — (5%, 7.5% D) (0.5%, 0.7% PrL) or 0.75 oz/625 sq.ft (7.5% D)	
/34022AA	Azalea (cuttings)		
FKAAQBB FKAACFO	Damping-off Damping-off (Cylindrocladium)	0.75 lb/100 gal (50%, 75% WP) or 0.5-1.5 tbls actual*/gal (25%, 75% WP) or 0.15 oz/gal (1.17 lb/gal or 13% FlC) —OR MAI— 0.63 tbls actual*/gal (42% WP)	Cuttings treatment. Soak cuttings for 15 to 30 minutes before placing in rooting media. OR MAI Formulated with dinocap.
/33019AA	Bluegrass (in nonpasture sites)		Do not graze in treated areas. Do not feed clippings to livestock.
FBATHAM	Melting-out (Helminthosporium)	3.0 oz/5 gal/ 1,000 sq.ft (50%, 75% WP)	Foliar application. Apply before disease is expected to appear. Repeat at 7 day intervals as needed.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/31057AA	Carnation		
FBATAAX	Alternaria blight (leaf spot)	0.5-1.25 lb/ 100 gal or 0.5-1.125 tbls actual*/gal (25%, 50%, 75% WP) or 0.15 oz/gal (1.17 lb/gal or 13% FlC) —OR MAI— 0.05-0.098 lb/10 gal or 0.3-0.75 tbls actual*/gal (14.5%, 42% WP) (5%, 6.5%, 7.5% WP/D) or — (5%, 7.5% D) (0.5%, 0.7% PrL) (4% PrD)	Foliar application. Apply 2 weeks after planting. Repeat at 7 to 10 day intervals as needed. OR MAI Formulated with dinocap; dicofol and carbaryl; dicofol and malathion; methoxychlor and malathion; methoxychlor and oxydemeton-methyl; carbaryl and malathion; diazinon and sulfur; dicofol, carbaryl, and malathion; diazinon, piperonyl butoxide, and pyrethrins; dicofol, carbaryl, aromatic petroleum derivative solvent, methylated naphthalenes, and lindane; dicofol, carbaryl, aromatic petroleum derivative solvent, methylated naphthalenes, and malathion; or carbaryl, petroleum distillate, piperonyl butoxide, pyrethrins, and rotenone.
FJAAUAH	Carnation rust (Uromyces)		
/31065AA	Chrysanthemum		
FMBCSBL	Leaf spot (Septoria)	0.94-1.25 lb/ 100 gal or 0.625-1.125 tbls actual*/gal (25%, 50%, 75% WP) or 0.15 oz/gal (1.17 lb/gal or 13% FlC) or	Foliar application. Apply immediately after planting. Repeat at 7 to 10 day intervals. OR MAI Formulated with dinocap; lindane and dicofol; dicofol and carbaryl; dicofol and malathion; methoxychlor and malathion; methoxychlor and oxydemeton-methyl; carbaryl and malathion; diazinon and sulfur; dicofol, carbaryl, and malathion; dinocap, carbaryl, and rotenone; diazinon, piperonyl butoxide, and pyrethrins; dicofol, carbaryl, aromatic petroleum derivative solvent, methylated
FFACEBJ	Powdery mildew (Erysiphe)		

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Chrysanthemum (continued)		
		--OR MAI-- 0.05-0.098 lb/10 gal or 0.3-0.75 tbls actual*/gal (14.5%, 42% WP) (5%, 6.5%, 7.5%, 8.82% WP/D) or — (5%, 7.5% D) (0.5%, 0.7% PrL) (4% PrD) or 0.75 oz/625 sq.ft (7.5% D)	naphthalenes, and lindane; dicofol, carbaryl, aromatic petroleum derivative solvent, methylated naphthalenes, and malathion; or carbaryl, petroleum distillate, piperonyl butoxide, pyrethrins, and rotenone.
/35056AA	Flowering Crabapple		
FEAJVAG	Scab (Venturia)	MAI: 1.2 oz/mature tree (7.5% D)	Delayed dormant and foliar application. Apply when leaves first appear. Repeat at weekly intervals until 30 days after petal fall. Formulated with dicofol and carbaryl.
/31111AA	Gladiolus		
FIAPQBB FKAAQBB	Corm rot Damping-off	2.5 tbls actual*/gal (50%, 75% WP) or 7.5 tbls actual*/gal (75% WP)	Corm treatment. Apply to corms as a preplanting soak for 20 to 30 minutes. Keep mixture stirred. Drain and plant immediately.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/31126AA	Iris		
FMBCDBD	Leaf spot (Didymellina)	0.94-1.25 lb/ 100 gal or 0.625-1.125 tbls actual*/gal (25%, 50%, 75% WP) --OR MAI-- 0.05-0.06 lb/10 gal or 0.3-0.4 tbls actual*/gal (5%, 7.5% WP/D) or — (5% D) (0.5%, 0.7% PrL) (4% PrD) or 0.75 oz/625 sq.ft (7.5% D)	Foliar application. Apply when plants emerge. Repeat at 7 to 10 day intervals. OR MAI Formulated with dicofol and carbaryl; dicofol and malathion; methoxychlor and oxydemeton-methyl; carbaryl and malathion; dicofol, carbaryl, and malathion; diazinon, piperonyl butoxide, and pyrethrins; or carbaryl, petroleum distillate, piperonyl butoxide, pyrethrins, and rotenone.
/34089AA	Lilac		
FFACMBT	Powdery mildew (Microsphaera)	MAI: — (0.7% PrL)	Foliar application. Apply before disease appears, or at first signs of disease. Formulated with carbaryl, petroleum distillate, piperonyl butoxide, pyrethrins, and rotenone.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/31137AA /31213AA	Marigold Zinnia		
FMBCAAX	Leaf spot (Alternaria)	1.0-1.25 lb/ 100 gal or 0.625-1.125 tbls actual*/gal (25%, 50%, 75% WP) or 0.15 oz/gal (1.17 lb/gal or 13% FlC) —OR MAI-- 0.05-0.098 lb/10 gal or 0.3-0.75 tbls actual*/gal (14.5%, 42% WP) (5%, 6.5%, 7.5% WP/D) or -- (5%, 7.5% D) (0.5%, 0.7%, 0.75% PrL) (4% PrD)	Foliar application. Apply when plants emerge. Repeat at 3 to 7 day intervals. OR MAI Formulated with dinocap; dicofol and carbaryl; dicofol and malathion; methoxychlor and malathion; methoxychlor and oxydemeton-methyl; carbaryl and malathion; diazinon and sulfur; resmethrin and acephate; dicofol, carbaryl, and malathion; diazinon, piperonyl butoxide, and pyrethrins; or carbaryl, petroleum distillate, piperonyl butoxide, pyrethrins, and rotenone.
/31003AA	Ornamental Flowering Plants		
FMBCQBB FFACQBB	Leaf spots Powdery mildew	MAI: — (5% D) (0.7% PrL)	Foliar application. Apply as a preventative when leaves appear. Repeat at 7 to 10 day intervals. Dust should be reapplied after sprinkler or overhead irrigation or rainfall. Formulated with dicofol, carbaryl, or malathion; carbaryl, piperonyl butoxide, pyrethrins, and rotenone; or carbaryl, petroleum distillate, piperonyl butoxide, pyrethrins, and rotenone.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/34120AA	Rose		Do not use wetting agents as injury may result.
FMAEDBS	Black spot (Diplocarpon)	0.5-1.25 lb/ 100 gal or 0.5-1 tbls actual*/gal (25%, 50%, 75% WP) or 0.15 oz/gal (1.17 lb/gal or 13% FlC) —OR MAI-- 0.05-0.98 lb/10 gal or 0.3-0.75 tbls actual*/gal (14.5%, 42% WP) (5%, 6.5%, 7.5%, 8.82% WP/D) or — (5%, 7.5% D) (0.5%, 0.7%, 0.75% PrL) (4% PrD) or 1.2-1.6 lb/A or 0.48-0.64 oz/ 1,000 sq.ft (4% D) or 0.75 oz/625 sq.ft (7.5% D)	Foliar application. Apply when first leaves unfold. Repeat at 7 to 10 day intervals throughout the season. OR MAI Formulated with dinocap; carbaryl; malathion; lindane and dicofol; dicofol and carbaryl; dicofol and malathion; methoxychlor and malathion; methoxychlor and oxydemeton-methyl; carbaryl and malathion; diazinon and sulfur; resmethrin and acephate; dicofol, carbaryl, and malathion; dicofol, carbaryl, and sulfur; dinocap, carbaryl, and rotenone; diazinon, piperonyl butoxide, and pyrethrins; carbaryl, piperonyl butoxide, pyrethrins, and rotenone; dicofol, carbaryl, aromatic petroleum derivative solvent, methylated naphthalenes, and lindane; dicofol, carbaryl, aromatic petroleum derivative solvent, methylated naphthalenes, and malathion; carbaryl, petroleum distillate, piperonyl butoxide, pyrethrins, and rotenone; or methoxychlor, dinocap, N-octyl bicycloheptene dicarboximide, petroleum distillate, pyrethrins, and rotenone.
FFACQBB	Powdery mildew		

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/31184AA	**Snapdragon**		
FAAACDP	Anthracnose (Colletotrichum)	1.0-1.25 lb/100 gal or 0.625-1.125 tbls actual*/gal (25%, 50%, 75% WP) or 0.15 oz/gal (1.17 lb/gal or 13% FlC) —OR MAI-- 0.05-0.098 lb/10 gal or 0.3-0.75 tbls actual*/gal (14.5%, 42% WP) (5%, 7.5%, 8.82% WP/D) or -- (5%, 7.5% D) (0.5%, 0.7% PrL) (4% PrD)	Foliar application. Apply when plants emerge. Repeat at 3 to 7 day intervals. OR MAI Formulated with dinocap; lindane and dicofol; dicofol and carbaryl; dicofol and malathion; methoxychlor and malathion; methoxychlor and oxydemeton-methyl; carbaryl and malathion; diazinon and sulfur; dicofol, carbaryl, and malathion; diazinon, piperonyl butoxide, and pyrethrins; or carbaryl, petroleum distillate, piperonyl butoxide, pyrethrins, and rotenone.
FFACOAB	Powdery mildew (Oidium)		
FJAAPEJ	Rust (Puccinia)		

GREENHOUSE NON-FOOD CROP

General Warnings and Limitations: Only the applicator is permitted to be in the greenhouse during soil application of folpet. Greenhouse vents must be open during application and for at least 1 hour after application. Workers planting in folpet-treated soil in greenhouses must wear gloves impermeable to folpet.

(Ornamental Plants and Forest Trees)

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/31159CA	Poinsettia		
FICBPES	Pythium root rot	1.0-1.25 lb/100 gal (25%, 50%, 75% WP) or 0.625 tbls actual*/gal (25% WP)	Soil treatment. Add a suitable spreader. Use 1 pint of suspension per 8 inch pan. Apply at time of panning. Repeat 10 days later.

DOMESTIC OUTDOOR

(Wood or Wood Structure Protection Treatments)

General Warnings and Limitations: The active ingredient is formulated into 3 types of products: clear wood preservatives, solid color oil stains, and semi-transparent oil stains. With noted exceptions, the formulations should be applied to exterior wood with no soil contact. Depending upon the type of product used, application can be made to new or bare wood or over previously stained, unsealed wood. Do not apply over painted surfaces. Most formulations do not recommend thinning. All wood to be treated should be clean and dry, and free from wax, oil, grease, chalk and mildew. Remove mildew by scrubbing with a solution of non-ammoniated detergent, household bleach, and water. Do not apply when temperature is below 40 F (4.4 C).

FOLPET

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/64000NB	Wood Protection Treatment of Existing Buildings or Parts of Buildings		Apply to siding, shakes, shingles, fencing, trim, decks, porches, outdoor furniture, beams, roofs, sills, or structural lumber.
/64003NB	Wood Protection Treatment of Finished Wood Products and/or Components of Buildings		
FYABQBB	Mildew	MAI: — (0.27%, 0.3%, 0.44%, 0.45%, 0.47%, 0.48%, 0.5%, 0.53%, 0.66%, 0.7%, 1% RTU)	Wood protection treatment. Apply by brush, spray, roller, or pad. When dipping is recommended, dip siding for 3 minutes and millwork for 5 minutes. Coverage for 1 gallon ranges from 100 square for rough or porous surfaces to 400 square feet for smooth surfaces. Generally, 2 coats may be applied. Individual product densities vary depending upon pigment and vehicle combinations for different color stains. The range between products varies from 0.019 to 0.059 pound active ingredient per gallon (the 1 percent formulation has 0.072 to 0.11 pound active ingredient per gallon). Formulated with bis(tributyltin) oxide; zinc naphthenate; or 3-iodo-2-propynyl butylcarbamate.
		MAI: — (0.49% RTU)	Wood protection treatment. Mix formulation 1:1 with an appropriate oil base solid color stain. Formulated with bis(tributyltin) oxide.
		MAI: — (0.5%, 0.8% RTU)	Wood protection treatment. Coverage for 1 gallon ranges from 300 to 600 square feet depending upon surface texture. Formulated with bis(tributyltin) oxide.
		MAI: — (0.5275% RTU)	Wood protection treatment. To apply, saturate surface, soak for 30 minutes, re-saturate, soak for 15 minutes then wipe dry. On rough-sawn surfaces, saturate with a roller, and remove with a dry roller. Formulated with bis(tributyltin) oxide.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Wood Protection Treatment of Existing Buildings or Parts of Buildings (continued)		
		MAI: -- (0.4% RTU)	Wood protection treatment. Apply by brush or spray. Coverage for 1 gallon is 400 square feet for 2 coats on smooth surfaces. (NOTE: No specific sites are listed on Registration Number 000043-00070). Formulated with creosote oil.
/64000NA /64003NA	(wood protection treatment for wood with ground contact)		
FYABQBB	Mildew	MAI: -- (0.3% RTU)	Wood protection treatment. Apply clear wood preservative as a dip. Do not apply over pressure or dip treated wood. Formulated with bis(tributyltin) oxide.
/64006OA	Wood Protection Treatments Made to Wooden Aquatic Structures and Items		
FYABQBB	Mildew	MAI: -- (0.5% RTU)	Wood protection treatment. Apply to marina and dock slip wood and swimming pool walk wood. Coverage for 1 gallon is 200 square feet for smooth wood. Formulated with bis(tributyltin) oxide.
/64004NA	Wood Protection Treatments Made to Wooden Containers and Other Items Used for Growing Plants		
FYABQBB	Mildew	MAI: -- (0.5%, 0.7% RTU)	Wood protection treatment. Apply to trellises or window boxes. Formulated with bis(tributyltin) oxide.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	INDOOR		
	(Ornamental Plants)		
/32000FA	Ornamental Plants (houseplants)		
FMAEDBS	Blackspot (Diplocarpon)	[MAI] -- (0.5% PrL)	Foliar application to houseplants. Apply before diseases appear. Formulated with dicofol, carbaryl, and malathion.
FMBCAAX	Leaf spot (Alternaria)		
FMBCSBL	Leaf spot (Septoria)		
FFACQBB	Powdery mildew		
FJAAUAH	Rust (Uromyces)		
	(Wood or Wood Structure Protection Treatments)		
/64000NB	Wood Protection Treatment of Existing Buildings or Parts of Buildings		See General Warnings and Limitations for DOMESTIC OUTDOOR, (Wood or Wood Structure Protection Treatments).
/64003NB	Wood Protection Treatment of Finished Wood Products and/or Components of Buildings		
FYABQBB	Mildew	MAI: — (0.5% RTU)	Wood protection treatment. May be applied to interior or exterior wood. Coverage for 1 gallon is 400 square feet for smooth surfaces. Formulated with 3-iodo-2-propynyl butylcarbamide.
	(Commercial and Industrial Uses)		
/810150A	Naugahyde		
FYABQBB	Mildew	— (0.0616% Impr)	Preservative incorporation. Incorporated in naugahyde vinyl upholstery.
		— (0.1056% Impr)	Preservative incorporation. Incorporated in naugahyde vinyl wall covering.
		— (0.2288% Impr)	Preservative incorporation. Incorporated in naugahyde gymnasium mat material.

EPA Compendium of Acceptable Uses

FOLPET

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
/810190A	Paints (for preservation of applied paint films)		For use in interior or exterior oil or alkyd paint formulations. Do not use in aqueous systems. Lead driers and pigments should be avoided in paint systems containing folpet. Iron is also potentially reactive, and paint formulations using pigments known to contain iron impurities should be carefully tested for color stability. The dosage level will depend upon the nature of the vehicle, the exposure conditions, nature of the substrate, and the amount of zinc oxide in the paint.
FYABQBB	Mildew	0.44-1.76% a.i. based on total weight of paint (88% D)	Preservative incorporation. The formulation is best incorporated in the pigment grind, prior to letdown.
		0.44-1.32% a.i. based on total weight of paint (4.29 lb/gal or 44% FlC)	Preservative incorporation. The formulation should be added during the dispersion phase of manufacture; however, it can be added in the letdown.

FOLPET

Listing of Registered Pesticide Products by Formulation

&088.0001 88% technical chemical
folpet (081601)
000239-01763 000476-02040 032691-00002

&090.0001 90% technical chemical
folpet (081601)
011678-00018

&201.4002 1.4% formulation intermediate
folpet (081601), carbaryl (056801), piperonyl butoxide, technical (067501), pyrethrins (069001) plus rotenone (and other cube resins) (071003)
004816-00276

folpet (081601), carbaryl (056801), petroleum distillate (063503), piperonyl butoxide, technical (067501), pyrethrins (069001) plus rotenone (and other cube resins) (071003)
001021-01042 004816-00265

&202.0002 2% formulation intermediate
folpet (081601), methoxychlor, technical (034001), 2,4-dinitro-6-octyl* phenyl crotonate 2,6-dinitro-4-octyl* phenyl crotonate nitrooctylphenols (principally dinitro) *a mixture of 1-methylhelptyl, 1-ethylhexyl and 1-propylpentyl (036001), petroleum distillate (063503), piperonyl butoxide, technical (067501) plus pyrethrins (069001)
001021-00943 001021-00987

folpet (081601), methoxychlor, technical (034001), 2,4-dinitro-6-octyl* phenyl crotonate 2,6-dinitro-4-octyl* phenyl crotonate nitrooctylphenols (principally dinitro) *a mixture of 1-methylhelptyl, 1-ethylhexyl and 1-propylpentyl (036001), N-octyl bicycloheptene dicarboximide (057001), petroleum distillate (063503), pyrethrins (069001) plus rotenone (and other cube resins) (071003)
001021-00761

&037.5002 37.5% formulation intermediate
folpet (081601), petroleum distillate (063503) plus pyrethrins (069001)
001021-01017

&050.0002 50% formulation intermediate
folpet (081601)
000239-02489 011678-00029 034688-00008

&075.0002 75% formulation intermediate
folpet (081601)
000239-01352

&080.0002 80% formulation intermediate
folpet (081601)
011678-00028

&088.0002 88% formulation intermediate
folpet (081601)
001100-00070 005383-00054#
#also used as a dust

&004.0003 4% dust
folpet (081601) plus carbaryl (056801)
008590-00183

&005.0003 5% dust
folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501) plus malathion (057701)
000070-00140

folpet (081601), carbaryl (056801) plus malathion (057701)
005535-00066

folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501), carbaryl (056801) plus malathion (057701)
000016-00049 000239-02346 000572-00055 005887-00004
049585-00001

folpet (081601), 2,4-dinitro-6-octyl* phenyl crotonate 2,6-dinitro-4-octyl* phenyl crotonate nitrooctylphenols (principally dinitro) *a mixture of 1-methylhelptyl, 1-ethylhexyl and 1-propylpentyl (036001), carbaryl (056801) plus rotenone (and other cube resins) (071003)
000869-00136

&007.5003 7.5% dust
folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501) plus carbaryl (056801)
008590-00343

folpet (081601), methoxychlor, technical (034001) plus malathion (057701)
000471-00008

folpet (081601), O,O-diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl)-phosphorothioate (057801) plus sulfur (077501)
007001-00317

folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501), carbaryl (056801) plus sulfur (077501)
007401-00158

&035.0003 35% dust
folpet (081601)
019753-00002*
*see auxiliary documentation

FOLPET

Listing of Registered Pesticide Products by Formulation (continued)

&088.0003 88% dust
folpet (081601)
005383-00054#
#also used as a formulation intermediate

&014.5006 14.5% wettable powder
folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501), carbaryl (056801) plus malathion (057701)
001159-00197 051400-00001*
*currently unavailable for review

&025.0006 25% wettable powder
folpet (081601)
004931-00102

&042.0006 42% wettable powder
folpet (081601) plus 2,4-dinitro-6-octyl* phenyl crotonate 2,6-dinitro-4-octyl* phenyl crotonate nitrooctylphenols (principally dinitro) *a mixture of 1-methylhelptyl, 1-ethylhexyl and 1-propylpentyl (036001)
000869-00065

&050.0006 50% wettable powder
folpet (081601)
000004-00181 000072-00524 000239-01102 000279-01508
000476-01609 000477-00237 000477-00275 002124-00480
008590-00215

&060.0006 60% wettable powder
folpet (081601), cadmium carbonate (012901) plus thiram (079801)
000334-00256*
*see auxiliary documentation

&075.0006 75% wettable powder
folpet (081601)
000239-01029 000476-01294 000557-01848 001159-00122
002125-00027 008590-00560 033955-00517

&005.0007 5% wettable powder/dust
folpet (081601), carbaryl (056801) plus malathion (057701)
001159-00147 005535-00051

folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501), carbaryl (056801) plus malathion (057701)
000904-00130 002125-00054

&006.5007 6.5% wettable powder/dust
folpet (081601), aromatic petroleum derivative solvent (006501), lindane (gamma isomer of benzene hexachloride) (009001), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501), methylated naphthalenes (054002) plus carbaryl (056801)
000004-00103

Listing of Registered Pesticide Products by Formulation (continued)

6.5% wettable powder/dust (continued)

folpet (081601), aromatic petroleum derivative solvent (006501), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501), methylated naphthalenes (054002), carbaryl (056801) plus malathion (057701)
000004-00185

&007.5007 7.5% wettable powder/dust

folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501) plus carbaryl (056801)
004636-00004

folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501) carbaryl (056801) plus sulfur (077501)
007401-00014

folpet (081601), methoxychlor, technical (034001) plus malathion (057701)
000407-00279

&008.8207 8.82% wettable powder/dust

folpet (081601), lindane (gamma isomer of benzene hexachloride) (009001) plus 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501)
010051-00013

&000.0610 0.0616% impregnated materials

folpet (081601)
007874-00004

&000.1110 0.1056% impregnated materials

folpet (081601)
007874-00005

&000.2310 0.2288% impregnated materials

folpet (081601)
007874-00006

&213.0014 13% (1.17 lb/gal) flowable concentrate

folpet (081601)
007401-00231

&244.0014 44% (4.29 lb/gal) flowable concentrate

folpet (081601)
001100-00078

&200.2716 0.27% liquid-ready to use

folpet (081601) plus zinc naphthenate (088301)
008177-00031

Listing of Registered Pesticide Products by Formulation (continued)

&200.3016 0.3% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
008177-00032 008177-00036

&200.4016 0.4% liquid-ready to use
folpet (081601) plus creosote oil (025003)
000043-00070

&200.4416 0.44% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
000518-00068

&200.4516 0.45% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
016164-00008

&200.4716 0.47% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
016164-00010

&200.4816 0.48% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
016164-00011

&200.4916 0.49% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
016164-00009

&200.5016 0.5% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
000043-00073 000043-00103 000043-00104 000748-00249
001386-00607 001609-00014 001609-00015 007313-00005
007313-00006 007313-00008 010856-00007 016164-00012

folpet (081601) plus 3-iodo-2-propynyl butylcarbamate (107801)
039702-00001

&200.5316 0.5275% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
011234-00004

&200.5316 0.53% liquid-ready to use
folpet (081601) plus 3-iodo-2-propynyl butylcarbamate (107801)
032259-00005 032259-00006 032259-00007 032259-00008

&200.6616 0.66% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
000577-00538 000577-00539

Listing of Registered Pesticide Products by Formulation (continued)

&200.7016 0.7% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
004664-00020 042768-00003

&200.8016 0.8% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
000748-00250

&201.0016 1% liquid-ready to use
folpet (081601) plus bis(tributyltin) oxide (083001)
010856-00005

&200.5019 0.5% pressurized liquid
folpet (081601) plus malathion (057701)
008222-00016

folpet (081601), methoxychlor, technical (034001) plus S-[2-(ethylsulfinyl)ethyl] O,O-dimethyl phosphorothioate (058702)
007401-00182

folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501) carbaryl (056801) plus malathion (057701)
000004-00186

folpet (081601), O,O-diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl)-phosphorothioate (057801), piperonyl butoxide, technical (067501) plus pyrethrins (069001)
000100-00539

folpet (081601), methoxychlor, technical (034001), 2,4-dinitro-6-octyl* phenyl crotonate 2,6-dinitro-4-octyl* phenyl crotonate nitrooctylphenols (principally dinitro) *a mixture of 1-methylhelptyl, 1-ethylhexyl and 1-propylpentyl (036001), N-octyl bicycloheptene dicarboximide (057001), petroleum distillate (063503), pyrethrins (069001) plus rotenone (and other cube resins) (071003)
000538-00049**
**suspended

&200.7019 0.7% pressurized liquid
folpet (081601), carbaryl (056801), piperonyl butoxide, technical (067501), pyrethrins (069001) plus rotenone (and other cube resins) (071003)
000538-00105**
**suspended

Listing of Registered Pesticide Products by Formulation (continued)

0.7% pressurized liquid (continued)

folpet (081601), carbaryl (056801), petroleum distillate (063503), piperonyl butoxide, technical (067501), pyrethrins (069001) plus rotenone (and other cube resins) (071003)

000239-02352 000334-00239 000407-00331 002059-00027**
004816-00348 004822-00029 005605-00128 008590-00250
009444-00050 009852-00039 010631-00003** 010807-00036*
011525-00020

*currently unavailable for review
**suspended

&200.7519 0.75% pressurized liquid

folpet (081601), resmethrin (097801) plus acephate (103301)
000239-02439

&004.0020 4% pressurized dust

folpet (081601), 1,1-bis(chlorophenyl)-2,2,2-trichloroethanol (010501) carbaryl (056801) plus malathion (057701)
000239-02415

Appendix A

Listing of Common Chemical Names Used on the Entry

Chemical Code	Common Name (source)	EPA Acceptable Common/Chemical Name
009001	lindane	lindane (gamma isomer of benzene hexachloride)
010501	dicofol	1,1-bis(chlorophenyl)-2,2,2-trichloroethanol
034001	methoxychlor	methoxychlor, technical
036001	dinocap (ISO)	2,4-dinitro-6-octyl*phenyl crotonate 2,6-dinitro-4-octyl*phenyl crotonate nitrooctylphenols (principally dinitro) *a mixture of 1-methylheptyl, 1-ethylhexyl and 1-propylpentyl
057801	diazinon (ISO)	O,O-diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate
057802	oxydemeton-methyl (ISO)	S-[2-(ethylsulfinyl)ethyl] O,O-dimethyl phosphorothioate
067501	piperonyl butoxide	piperonyl butoxide, technical
071003	rotenone	rotenone (and other cube resins)

APPENDIX IV

BIBLIOGRAPHY APPENDICES

GUIDE TO USE OF THIS BIBLIOGRAPHY

1. CONTENT OF BIBLIOGRAPHY. This bibliography contains citations of all studies considered relevant by EPA in arriving at the positions and conclusions stated elsewhere in the Standard. Primary sources for studies in this bibliography have been the body of data submitted to EPA and its predecessor agencies in support of past regulatory decisions. Selections from other sources including the published literature, in those instances where they have been considered, will be included.

2. UNITS OF ENTRY. The unit of entry in this bibliography is called a "study." In the case of published materials, this corresponds closely to an article. In the case of unpublished materials submitted to the Agency, the Agency has sought to identify documents at a level parallel to the published article from within the typically larger volumes in which they were submitted. The resulting "studies" generally have a distinct title (or at least a single subject), can stand alone for purposes of review, and can be described with a conventional bibliographic citation. The Agency has attempted also to unite basic documents and commentaries upon them, treating them as a single study.

3. IDENTIFICATION OF ENTRIES. The entries in this bibliography are sorted numerically by "Master Record Identifier," or MRID, number. This number is unique to the citation, and should be used at any time specific reference is required. It is not related to the six-digit "Accession Number" which has been used to identify volumes of submitted studies; see paragraph 4(d)(4) below for a further explanation. In a few cases, entries added to the bibliography late in the review may be preceded by a nine-character temporary identifier. These entries are listed after all MRID entries. This temporary identifier number is also to be used whenever specific reference is needed.

4. FORM OF ENTRY. In addition to the Master Record Identifier (MRID), each entry consists of a citation containing standard elements followed, in the case of material submitted to EPA, by a description of the earliest known submission. Bibliographic conventions used reflect the standards of the American National Standards Institute (ANSI), expanded to provide for certain special needs.

a. Author. Whenever the Agency could confidently identify one, the Agency has chosen to show a personal author. When no individual was identified, the Agency has shown an identifiable laboratory or testing facility as author. As a last resort, the Agency has shown the first submitter as author.

b. Document Date. When the date appears as four digits with no question marks, the Agency took it directly from the document. When a four-digit date is followed by a question mark, the bibliographer deduced the date from evidence in the document. When the date appears as (19??), the Agency was unable to determine or estimate the date of the document.

c. Title. In some cases, it has been necessary for Agency bibliographers to create or enhance a document title. Any such editorial insertions are contained between square brackets.

d. Trailing Parentheses. For studies submitted to the Agency in the past, the trailing parentheses include (in addition to any self-explanatory text) the following elements describing the earliest known submission:

  (1) Submission Date. The date of the earliest known submission appears immediately following the word "received."

  (2) Administrative Number. The next element, immediately following the word "under," is the registration number, experimental use permit number, petition number, or other administrative number associated with the earliest known submission.

  (3) Submitter. The third element is the submitter, following the phrase "submitted by." When authorship is defaulted to the submitter, this element is omitted.

  (4) Volume Identification (Accession Numbers). The final element in the trailing parentheses identifies the EPA accession number of the volume in which the original submission of the study appears. The six-digit accession number follows the symbol "CDL," standing for "Company Data Library." This accession number is in turn followed by an alphabetic suffix which shows the relative position of the study within the volume. For example, within accession number 123456, the first study would be 123456-A; the second, 123456-B; the 26th, 123456-Z; and the 27th, 123456-AA.

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00053326	Chevron Chemical Company (1957) Residue Status. (Unpublished study received Feb 11, 1958 under unknown admin. no.; CDL:119325-C)
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☆U.S. GOVERNMENT PRINTING OFFICE: 1987-761-002/60640

APPENDIX V

FORMS APPENDICES

OMB Approval No. 2000-0468

FIFRA SECTION 3(C)(2)(B) SUMMARY SHEET

EPA REGISTRATION NO.

PRODUCT NAME

APPLICANT'S NAME

DATE GUIDANCE DOCUMENT ISSUED

With respect to the requirement to submit "generic" data imposed by the FIFRA section 3(C)(2)(B) notice contained in the referenced Guidance Document, I am responding in the following manner:

☐ 1. I will submit data in a timely manner to satisfy the following requirements. If the test procedures I will use deviate from (or are not specified in) the Registration Guidelines or the Protocols contained in the Reports of Expert Groups to the Chemicals Group, OECD Chemicals Testing Programme, I enclose the protocols that I will use:

☐ 2. I have entered into an agreement with one or more other registrants under FIFRA section 3(C)(2)(B)(ii) to satisfy the following data requirements. The tests, and any required protocols, will be submitted to EPA by:

NAME OF OTHER REGISTRANT

☐ 3. I enclose a completed "Certification of Attempt to Enter Into an Agreement with Other Registrants for Development of Data" with respect to the following data requirements:

☐ 4. I request that you amend my registration by deleting the following uses (this option is not available to applicants for new products):

☐ 5. I request voluntary cancellation of the registration of this product. (This option is not available to applicants for new products.)

REGISTRANT'S AUTHORIZED REPRESENTATIVE	SIGNATURE	DATE

EPA Form 8580-1 (10-82)

OMB Approval No. 2000-0468

CERTIFICATION OF ATTEMPT TO ENTER INTO AN AGREEMENT WITH OTHER REGISTRANTS FOR DEVELOPMENT OF DATA

(To qualify, certify ALL four items)

1. I am duly authorized to represent the following firm(s) who are subject to the requirements of a Notice under FIFRA Section 3(c)(2)(B) contained in a Guidance Document to submit data concerning the active ingredient:

GUIDANCE DOCUMENT DATE

ACTIVE INGREDIENT

NAME OF FIRM	EPA COMPANY NUMBER

(This firm or group of firms is referred to below as "my firm".)

2. My firm is willing to develop and submit the data as required by that Notice, if necessary. However, my firm would prefer to enter into an agreement with one or more other registrants to develop jointly, or to share in the cost of developing, the following required items or data:

3. My firm has offered in writing to enter into such an agreement. Copies of the offers are attached. That offer was irrevocable and included an offer to be bound by an arbitration decision under FIFRA Section 3(c)(2)(B)(iii) if final agreement on all terms could not be reached otherwise. This offer was made to the following firm(s) on the following date(s):

NAME OF FIRM	DATE OF OFFER

However, none of those firm(s) accepted my offer.

4. My firm requests that EPA not suspend the registration(s) of my firm's product(s), if any of the firms named in paragraph (3) above have agreed to submit the data listed in paragraph (2) above in accordance with the Notice. I understand EPA will promptly inform me whether my firm must submit data to avoid suspension of its registration(s) under FIFRA Section 3(c)(2)(B). (This statement does not apply to applicants for new products.) I give EPA permission to disclose this statement upon request.

TYPED NAME	SIGNATURE	DATE

EPA Form 8580-6 (10-82)

PRODUCT SPECIFIC DATA REPORT

EPA Reg. No.____________________ Date ____________________

Guidance Document for ______________________________________

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID Number or EPA Accession Number	Submitting Data (Attached)	
§158.120 PRODUCT CHEMISTRY					
61-1	Identity of ingredients				
61-2	Statement of composition				
61-3	Discussion of formation of ingredients				
62-1	Preliminary analysis				
62-2	Certification of limits				
62-3	Analytical methods for enforcement limits				
63-2	Color				
63-3	Physical state				
63-4	Odor				
63-5	Melting point				
63-6	Boiling point				
63-7	Density, bulk-density, or specific gravity				
63-8	Solubility				
63-9	Vapor pressure				
63-10	Dissociation constant				
63-11	Octanol/water partition coefficient				
63-12	pH				

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID Number or EPA Accession Number	Submitting Data (Attached)	
63-13	Stability				
63-14	Oxidizing/reducing reaction				
63-15	Flammability				
63-16	Explodability				
63-17	Storage stability				
63-18	Viscosity				
63-19	Miscibility				
63-20	Corrosion characteristics				
63-21	Dielectric breakdown voltage				
§158.135 TOXICOLOGY					
81-1	Acute oral toxicity, rat				
81-2	Acute dermal toxicity, rabbit				
81-3	Acute inhalation, toxicity, rat				
81-4	Primary eye irritation, rabbit				
81-5	Primary dermal irritation				
81-6	Dermal sensitization				

3219/10

OMB Approval No. 2000-0468
Expiration Date 5/31/86

"GENERIC" DATA EXEMPTION STATEMENT

EPA Product Registration Number: ____________________

Registrant's Name and Address: ____________________________________

____

As an authorized representative of the registrant of the product identified above, I certify that:

(1) I have read and am familiar with the terms of the Notice from EPA dated ____________ concerning a requirement for submission of "generic" data on the active ingredient named ____________________________________ under FIFRA Section 3(c)(2)(B).

(2) My firm requests that EPA not suspend the registration of our product, despite our lack of intent to submit the generic data in question, on the grounds that the product contains the active ingredient solely as the result of the incorporation into the product of another product which contains that active ingredient, which is registered under FIFRA Section 3, and which is purchased by us from another producer.

(3) An accurate Confidental Statement of Formula(CSF) for the above identified product is attached to this statement. That formula statement indicates, by company name, registration number, and product name, the source of the subject active ingredient in my firm's product,

OR

The CSF dated ____________ on file with EPA is complete, current and accurate and contains the information requested on the current CSF Form No. 8570-4. The registered source(s) of the above named active ingredient in my product(s) is/are ____________________________ and their registration number(s) is/are________________ .

My firm will apply for an amendment to the registration prior to changing the source of the active ingredient in our product.

(4) I understand, and agree on behalf of my firm, that if at any time any portion of this Statement is no longer true, or if my firm fails to comply with the undertakings made in this Statement, my firm's product's registration may be suspended with FIFRA Section 3(c)(2)(B).

Registrant's authorized representative: ______________________________
(Signature)

Dated: ______________________ ______________________________
(Typed)